

DICTIONARY FILE UPDATES: 29 SEP 2005 HIGHEST RN 864227-43-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

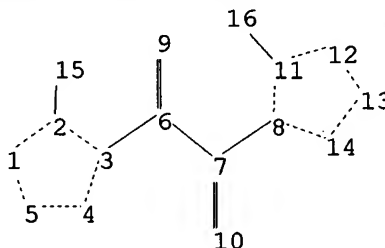
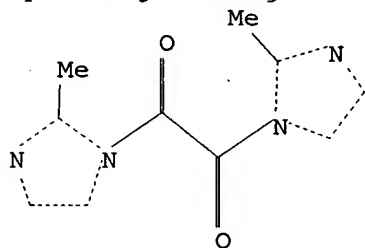
```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
*****
```

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10705586.str



chain nodes :

6 7 9 10 15 16

ring nodes :

1 2 3 4 5 8 11 12 13 14

chain bonds :

2-15 3-6 6-7 6-9 7-8 7-10 11-16

ring bonds :

1-2 1-5 2-3 3-4 4-5 8-11 8-14 11-12 12-13 13-14

exact/norm bonds :

1-2 1-5 2-3 3-4 3-6 4-5 6-9 7-8 7-10 8-11 8-14 11-12 12-13 13-14

exact bonds :

2-15 6-7 11-16

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:Atom 9:CLASS 10:CLASS
11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS

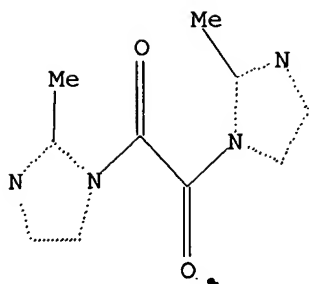
L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1

STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 12:14:53 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0. ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: .ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 0 TO 0

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 12:14:59 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 30 TO ITERATE

100.0% PROCESSED 30 ITERATIONS 4 ANSWERS
SEARCH TIME: 00.00.01

L3 4 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

161.33

161.54

FILE 'CAPLUS' ENTERED AT 12:15:01 ON 30 SEP 2005

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FILE COVERS 1907 - 30 Sep 2005 VOL 143 ISS 15

FILE LAST UPDATED: 29 Sep 2005 (20050929/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13

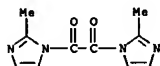
L4 3 L3

=> d ibib abs hitstr tot

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

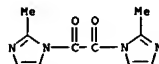
ACCESSION NUMBER: 2004:589134 CAPLUS
DOCUMENT NUMBER: 141:116131
TITLE: Peroxyoxalate chemiluminescence compound and system
INVENTOR(S): Lee, Ji Hoon; Schlautman, Mark A.; Carravay, Elizabeth R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004142358	A1	20040722	US 2003-705586	20031110
PRIORITY APPLN. INFO.: US 2002-425432P 20021112				
AB An unstable, Me-substituted (1,1'-oxalyl di-imidazole) mol. capable of accelerating the rate at which a material attains maximum chemiluminescence when reacted hydrogen peroxide in the presence of a fluorophore and a method to synthesize such mols.				
IT 505093-69-69 RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (fast peroxyoxalate chemiluminescence compound and system)				
RN 505093-69-6 CAPLUS				
CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[2-methyl- (9CI) (CA INDEX NAME)				



L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

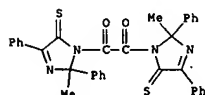
ACCESSION NUMBER: 2003:22228 CAPLUS
DOCUMENT NUMBER: 138:296792
TITLE: Fast peroxyoxalate chemiluminescence for minimized analytical separation systems
AUTHOR(S): Lee, Ji Hoon; Je, Jongtae; Schlautman, Mark A.; Carravay, Elizabeth R.
CORPORATE SOURCE: Department of Environmental Toxicology and the Clemson Institute of Environmental Toxicology, Clemson University, Pendleton, SC, 29670, USA
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2003), (2), 270-271
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The maximum intensity, I_{max}, and time required to reach the maximum emission, t_{max}, for 1-aminopyrene monitored in 1,1'-oxalyl di-4-methylimidazole (ODMI) chemiluminescence (CL) reactions are approx. 61 times higher and 16 times faster than their resp. values for bis(2,4,6-trichlorophenyl)oxalate (TCPO) CL reactions in the presence of imidazole (ImH).
IT 505093-69-6
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(fast peroxyoxalate chemiluminescence for minimized anal. separation systems)
RN 505093-69-6 CAPLUS
CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[2-methyl- (9CI) (CA INDEX NAME)



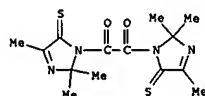
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1976:74181 CAPLUS
DOCUMENT NUMBER: 84:74181
TITLE: Joint action of elemental sulfur and gaseous ammonia upon ketones. 88. Substitution products of 2H-imidazole-4(3H)-thiones and 2H-imidazol-4(3H)-ones
AUTHOR(S): Aisinger, Friedrich; Saus, Alfons; Fichtner, E.; Graeber, H. J.; Leuchtenberger, W.
CORPORATE SOURCE: Inst. Tech. Chem. Petrochem., Rheinisch-Westfael. Tech. Hochsch., Aachen, Fed. Rep. Ger.
SOURCE: Monatshefte fuer Chemie (1975), 106(6), 1449-60
CODEN: MOCHB7; ISSN: 0026-9247
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 84:74181
GI For diagram(s), see printed CA Issue.
AB Na salts of 2H-imidazole-4(3H)-thiones [I; R, R1, R2 = Ph, Me, CH₃, or R1R2 = (CH₂)₅, R3 = H] reacted with alkyl and aryl carboxylic acid chlorides to give the corresponding 3-acyl-2H-imidazole-4(3H)-thiones (I, R3 = Bz, Ac, COEt, COPr, cyclopropylcarbonyl, etc.), with dicarboxylic acid dichlorides the N,N'-diacylbis-3-imidazoline-5-thiones II [X = (CH₂)₄, (CH₂)₆, etc.] were obtained, whereas with carbamic acid chlorides and chloroformic acid esters the corresponding ureas (I, R3 = CONMe₂, CONEt₂, etc.) and urethane derivs. [I, R3 = CO₂Bu, CO₂(CH₂)₄CHMeEt] were formed. Analogously 2H-imidazol-4(3H)-ones reacted with acid chlorides to the corresponding 3-acyl-2-imidazol-4(3H)-ones.
IT 50488-90-7P 50488-94-1P 50488-95-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 50488-90-7 CAPLUS
CN 4H-imidazole-4-thione, 3,3'-(1,2-dioxo-1,2-ethanediyl)bis[2,3-dihydro-2-methyl-2,5-diphenyl- (9CI) (CA INDEX NAME)

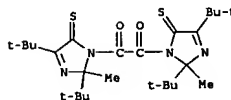


RN 50488-94-1 CAPLUS
CN 4H-imidazole-4-thione, 3,3'-(1,2-dioxo-1,2-ethanediyl)bis[2,3-dihydro-2,2,5-trimethyl- (9CI) (CA INDEX NAME)



RN 50488-95-2 CAPLUS
CN 4H-imidazole-4-thione, 3,3'-(1,2-dioxo-1,2-ethanediyl)bis[2,5-bis(1,1-dimethylethyl)-2,3-dihydro-2-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



=> file reg

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
15.27	176.81

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-2.19	-2.19

CA SUBSCRIBER PRICE

FILE 'REGISTRY' ENTERED AT 12:15:13 ON 30 SEP 2005
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STRUCTURE FILE UPDATES: 29 SEP 2005 HIGHEST RN 864227-43-0
DICTIONARY FILE UPDATES: 29 SEP 2005 HIGHEST RN 864227-43-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *

ring nodes :

1 2 3 4 5 8 11 12 13 14

chain bonds :

3-6 5-16 6-7 6-9 7-8 7-10 13-15

ring bonds :

1-2 1-5 2-3 3-4 4-5 8-11 8-14 11-12 12-13 13-14

exact/norm bonds :

1-2 1-5 2-3 3-4 3-6 4-5 6-9 7-8 7-10 8-11 8-14 11-12 12-13 13-14

exact bonds :

5-16 6-7 13-15

Match level :

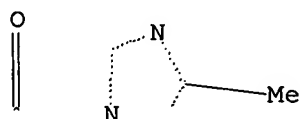
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:Atom 9:CLASS 10:CLASS
11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS

L5 STRUCTURE UPLOADED

=> d

L5 HAS NO ANSWERS

L5 STR



100.0% PROCESSED 771 ITERATIONS
SEARCH TIME: 00.00.01

2 ANSWERS

L7 2 SEA SSS FUL L5

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

161.33

338.14

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRY

TOTAL
SESSION

CA SUBSCRIBER PRICE

0.00

-2.19

FILE 'CAPLUS' ENTERED AT 12:16:01 ON 30 SEP 2005

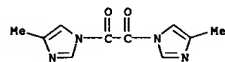
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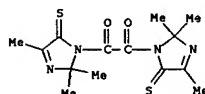
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L8 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2003:823852 CAPLUS
 DOCUMENT NUMBER: 140:388065
 TITLE: Solvent and pH effects on fast and ultrasensitive 1,1'-oxalyldi(4-methylimidazole chemiluminescence
 AUTHOR(S): Lee, Ji Hoon; Je, Jongtae; Hur, Jin; Schlautman, Mark A.; Carraway, Elizabeth R.
 CORPORATE SOURCE: Clemson Institute of Environmental Toxicology, Clemson University, Pendleton, SC, 29670, USA
 SOURCE: Analyst (Cambridge, United Kingdom) (2003), 128(10), 1257-1261
 CODEN: ANALAO; ISSN: 0003-2654
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Solvent and pH effects on fast and ultrasensitive 1,1'-oxalyldi(4-methylimidazole chemiluminescence (OD4MI-CL) were studied. The influences of these two factors on the complex OD4MI-CL reaction are discussed within a conceptual prototype for developing aqueous and non-aqueous capillary electrophoresis (ACE and NACE) devices with OD4MI-CL detection. The reaction channel length and OD4MI yield from the reaction between bis(2,4,6-trichlorophenyl) oxalate (TCPO) and 4-methylimidazole in the channel will be influenced by pH, water volume fraction, and cosolvent properties of the solution. Optimum OD4MI-CL efficiency is observed at pH 6.5 when 1-propanol, which has a low dielec. constant ($\epsilon = 20.8$), is used as the NACE solvent in the separation channel. Water ($\epsilon = 80.1$), the solvent in the ACE separation channel, acts similarly to a high dielec. constant organic solvent in NACE because the disadvantages normally associated with TCPO-CL reactions in water disappear due to the faster OD4MI-CL reaction vs. OD4MI decomposition in aqueous solution. Therefore, it is expected that the OD4MI-CL detection system can be used in both NACE and ACE devices without requiring detector modifications. We also conclude that OD4MI-CL detection in NACE and ACE devices will be much more sensitive than the TCPO-CL detection used in current NACE devices.
 IT 685880-49-3
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (solvent and pH effects on fast and ultrasensitive 1,1'-oxalyldi(4-methylimidazole chemiluminescence)
 RN 685880-49-3 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis(4-methyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1976:74181 CAPLUS
 DOCUMENT NUMBER: 84:74181
 TITLE: Joint action of elemental sulfur and gaseous ammonia upon ketones. 88. Substitution products of 2H-imidazole-4(3H)-thiones and 2H-imidazol-4(3H)-ones
 AUTHOR(S): Asinger, Friedrich; Saus, Alfons; Fichtner, E.; Graeber, H. J.; Leuchtenberger, V.
 CORPORATE SOURCE: Inst. Tech. Chem. Petrochem., Rheinisch-Westfael. Tech. Hochsch., Aachen, Fed. Rep. Ger.
 SOURCE: Monatshefte fuer Chemie (1975), 106(6), 1449-60
 CODEN: MOCHB7; ISSN: 0026-9247
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 OTHER SOURCE(S): CASREACT 84:74181
 GI For diagram(s), see printed CA Issue.
 AB Na salts of 2H-imidazole-4(3H)-thiones (I; R, R1, R2 = Ph, Me, OMe3, or R1R2 = (CH2)5, R3 = H) reacted with alkyl and aryl carboxylic acid chlorides to give the corresponding 3-acyl-2H-imidazole-4(3H)-thiones (I, R3 = Bz, Ac, COEt, COPr, cyclopropylcarbonyl, etc.), with dicarboxylic acid dichlorides the N,N'-diacylbis-3-imidazoline-5-thiones II [X = (CH2)4, (CH2)8, etc.] were obtained, whereas with carbamic acid chlorides and chloroformic acid esters the corresponding ureas (I, R3 = CONHMe2, CONEt2, etc.) and urethane derivs. [I, R3 = CO2Bu, CO2(CH2)4OMeEt] were formed. Analogously 2H-imidazol-4(3H)-ones reacted with acid chlorides to the corresponding 3-acyl-2-imidazol-4(3H)-ones.
 IT 58488-94-1P
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)
 RN 58488-94-1 CAPLUS
 CN 4H-Imidazole-4-thione, 3,3'-(1,2-dioxo-1,2-ethanediyl)bis[2,3-dihydro-2,2,5-trimethyl- (9CI) (CA INDEX NAME)



=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

10.33

348.47

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-1.46

-3.65

FILE 'REGISTRY' ENTERED AT 12:16:11 ON 30 SEP 2005

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STRUCTURE FILE UPDATES: 29 SEP 2005 HIGHEST RN 864227-43-0

DICTIONARY FILE UPDATES: 29 SEP 2005 HIGHEST RN 864227-43-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

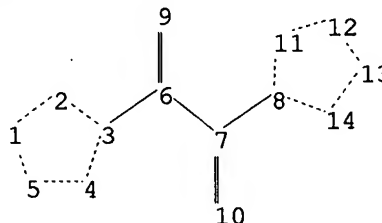
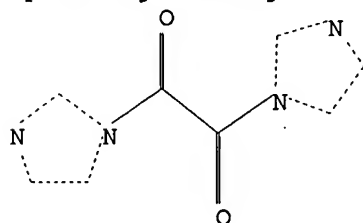
Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10705586c.str



chain nodes :

6 7 9 10

ring nodes :

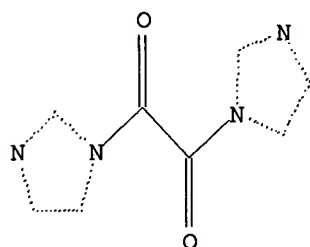
1 2 3 4 5 8 11 12 13 14

chain bonds :
 3-6 6-7 6-9 7-8 7-10
 ring bonds :
 1-2 1-5 2-3 3-4 4-5 8-11 8-14 11-12 12-13 13-14
 exact/norm bonds :
 1-2 1-5 2-3 3-4 3-6 4-5 6-9 7-8 7-10 8-11 8-14 11-12 12-13 13-14
 exact bonds :
 6-7

Match level :
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:Atom 9:CLASS 10:CLASS
 11:Atom 12:Atom 13:Atom 14:Atom

L9 STRUCTURE UPLOADED

=> d
 L9 HAS NO ANSWERS
 L9 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 19
 SAMPLE SEARCH INITIATED 12:16:50 FILE 'REGISTRY'
 SAMPLE SCREEN SEARCH COMPLETED - 9 TO ITERATE

100.0% PROCESSED 9 ITERATIONS 0 ANSWERS
 SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**
 PROJECTED ITERATIONS: 9 TO 360
 PROJECTED ANSWERS: 0 TO 0

L10 0 SEA SSS SAM L9

=> s 19 full
 FULL SEARCH INITIATED 12:16:53 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 192 TO ITERATE

100.0% PROCESSED 192 ITERATIONS 14 ANSWERS
 SEARCH TIME: 00.00.01

L11 14 SEA SSS FUL L9

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
161.33	509.80

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-3.65

CA SUBSCRIBER PRICE

FILE 'CAPLUS' ENTERED AT 12:16:58 ON 30 SEP 2005

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FILE COVERS 1907 - 30 Sep 2005 VOL 143 ISS 15

FILE LAST UPDATED: 29 Sep 2005 (20050929/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l11

L12 55 L11

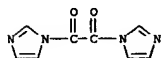
=> d ibib abs hitstr tot

THE ESTIMATED COST FOR THIS REQUEST IS 271.70 U.S. DOLLARS

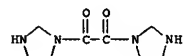
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L12 ANSWER 1 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:417414 CAPLUS
Correction of: 2005:195474
Correction of: 142:260983
TITLE: Product class 4: 1,2-diketones and related compounds
AUTHOR(S): Landais, Y.; Vincent, J. M.
CORPORATE SOURCE: Laboratoire de Chimie Organique et Organometallique,
UMR 5802, Talence, F-33405, Fr.
SOURCE: Science of Synthesis (2005), Volume Date 2004, 26,
647-743
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal: General Review
LANGUAGE: English
AB A review of the preparation of 1,2-diketones, α -thio, α -seleno, α -imino, α -hydroxy, α -hydrazono and α -diazo ketones as well as applications to organic synthesis.
IT INDEXING IN PROGRESS
IT 18637-83-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(review preparation and application of 1,2-diketones and related derivs.)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 2 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
independently H or a branched or unbranched alkyl chain, a branched or unbranched alkenyl chain, a branched or unbranched alkynyl chain, carbocyclic, aryl, heterocyclic, aza-amino acid, amino acid or a mimetic thereof, peptide or a mimetic thereof; all of the above residues optionally being substituted, and n can be 0-2. The present invention also provides a new method for the treatment of Alzheimer's disease and Down Syndrome. The N-termini of amyloid- β -peptides deposited in Alzheimer's disease and Down syndrome brain bear pyroglutamic acid. The pGlu formation is an important event in the development and progression in the disease, since the modified amyloid β -peptides show an enhanced tendency to β -amyloid aggregation and toxicity, likely worsening the onset and progression of the disease. In contrast, in the natural AB-peptides (3-40/42), glutamic acid is present as an N-terminal amino acid. An enzymic conversion of Glu to pGlu was not known to date. This aspect was addressed by the synthesis of AB(3-11)a and AB(1-11)a, contg. the amino acid glutamine instead of glutamic acid at position three, the detn. of the substrate characteristics of these modified amyloid β -peptides against QC, DP IV and DP IV-like enzymes and aminopeptidases and the use of inhibitors of QC to prevent the formation of pGlu from a N-terminal glutamyl residue of the amyloid p-derived peptides (1-11) and (3-11).
IT 051308-97-9, Oxalic acid diimidazolide
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(human QC inhibition by; use of effectors of glutamyl and glutamate cyclases for therapy)
RN 851308-97-9 CAPLUS
CN Imidazolidine, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 2 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:395072 CAPLUS
DOCUMENT NUMBER: 142:443782
TITLE: Use of effectors of glutamyl and glutamate cyclases for therapy
INVENTOR(S): Schilling, Stephan; Hoffmann, Torsten; Niestroj, Andre
Johannes; Demuth, Hans-Ulrich; Heiser, Ulrich
PATENT ASSIGNEE(S): Probiobring Ag, Germany
SOURCE: PCT Int. Appl., 105 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005039548	A2	20050506	WO 2004-EP11630	20041015
WO 2005039548	A3	20050630		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPL. INFO.: MARPAT 142:443782 US 2003-512038P P 20031015
OTHER SOURCE(S):
AB The present invention provides novel physiol. substrates of mammalian glutamyl cyclase (QC, EC 2.3.2.5), new effectors of QC and the use of such effectors and pharmaceutical compns. comprising such effectors for the treatment of diseases that can be treated by modulation of QC-activity, e.g. diseases selected from the group consisting of duodenal cancer with or w/o Helicobacter pylori infections, colorectal cancer, Zollinger-Ellison syndrome, Familial British Dementia and Familial Danish Dementia. Glutamyl cyclase (QC, EC 2.3.2.5) catalyzes the intramol. cyclization of N-terminal glutamine residues into pyroglutamic acid (pGlu) liberating ammonia. The present invention provides novel physiol. substrates of QC in mammals, selected from the group consisting of Glul-ABci, Glul-Adan, Gln3-AB(3-40/42), and Gln1-Gastrins (17 and 34). It was shown by inhibition studies that human QC is a metal-dependent transferase. QC apoenzyme could be reactivated most efficiently by zinc ions, and the metal-binding motif of zinc-dependent aminopeptidases is also present in human QC. Compds. interacting with the active-site bound metal are potent inhibitors of QC. Unexpectedly, it was shown that recombinant human QC as well as QC-activity from brain exts. catalyze both, the N-terminal glutamyl as well as glutamate cyclization. Most striking is the finding, that cyclase-catalyzed Glul-conversion is favored around pH 6.0 while Gln1-conversion to pGlu-derivs. occurs with a pH-optimum of around 8.0. Since the formation of pGlu-AB-related peptides can therefore be suppressed by inhibition of recombinant human QC and QC-activity from pig pituitary exts., the enzyme QC is, according to the present invention, a target in drug development for treatment of Alzheimer's disease. The present invention provides QC-inhibitors which can be described generally by the formula (I), SHC(R5)(R6)(CH2)nC(R4)(R3)N(R2)R1 or the pharmaceutically acceptable salts thereof, including all stereoisomers; formula (I) wherein R'-R' are

L12 ANSWER 3 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:283338 CAPLUS
DOCUMENT NUMBER: 142:336179
TITLE: Preparation of cepem compounds as antimicrobials for the treatment of infectious disease
INVENTOR(S): Yamanaka, Toshio; Murano, Kenji; Toda, Ayako; Ohki, Hidenori; Oogaki, Masaru; Okuda, Shinya; Kawabata, Kohji; Inoue, Satoshi; Mizumi, Keiji; Itoh, Kenji; Sato, Kenji
PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd., Japan; Wakunaga Pharmaceutical Co., Ltd.
SOURCE: PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

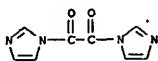
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005027909	A1	20050331	WO 2004-JP14018	20040917

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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2005096306 A1 20050505 US 2004-942916 20040917
PRIORITY APPL. INFO.: AU 2003-905084 A 20030918
OTHER SOURCE(S): MARPAT 142:336179
GI

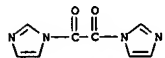
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The present invention relates to I (R1 = lower alkyl or hydroxy (lower) alkyl, and R2 = hydrogen or amino protecting group, if R1 and R2 are bonded together and form lower alkylene; R3 = substituted amine, amide, etc; R4 = carbonyl or protected carbonyl; and R5 = amino or protected amino) as potential antibacterial agents. Thus, II in N, N-dimethylformamide was treated with 1,3-bis(trimethylsilyl)urea, KI, and a protected pyrazole to give a crude solid which was treated with anisole and trifluoroacetic acid to give III.
IT 18637-83-7, 1,1'-Oxalyldiimidazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cepem lactams antibiotics as antimicrobial agents for the treatment of infectious disease)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2004:97:335 CAPLUS
DOCUMENT NUMBER: 142:113766
TITLE: Catecholic Flavonoids Acting as Telomerase Inhibitors
AUTHOR(S): Menichincheri, Maria; Ballinari, Dario; Bargiotti, Alberto; Bonomini, Luisa; Ceccatelli, Walter; D'Alessio, Roberto; Fretta, Antonella; Moll, Juergen; Polucci, Paolo; Soncini, Chiara; Tibolla, Marcellino; Trosset, Jean-Yves; Vanotti, Ernes
CORPORATE SOURCE: Department of Chemistry, BU-Nerviano Medical Sciences, Nerviano (MI), 20014, Italy
SOURCE: Journal of Medicinal Chemistry (2004), 47(26), 6466-6475
CODEN: JMCMAH; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:113766
AB In recent years telomerase has been identified as a new promising target in oncol. and consequently new telomerase inhibitors have been intensely explored as anticancer agents. Focused screening of several polyhydroxylated flavonoids has allowed us to identify 7,8,3',4'-tetrahydroxyflavone as a new telomerase inhibitor with an interesting in vitro activity in a Flash-Plate assay (IC50 = 0.2 μM) that has been confirmed in the classical TRAP assay. Starting from this compound, we developed a medicinal chemical program to optimize our lead, and in particular to replace one of the two catechols with potential bioisosteres. From this study, new structural analogs characterized by submicromolar potencies have been obtained. Their synthesis and biol. activity are described.
IT 18637-83-7, 1,1'-Oxalylidimidazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of catecholic flavonoids as telomerase inhibitors)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediy)bis- (9CI) (CA INDEX NAME)

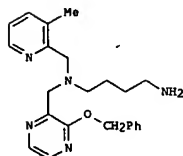
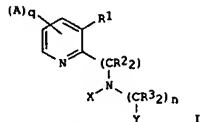


REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2004:070165 CAPLUS
DOCUMENT NUMBER: 141:379809
TITLE: Preparation of pyridine derivatives as CXCR4 chemokine receptor binding compounds
INVENTOR(S): Bridget, Gary; McEachern, Ernest J.; Skerlj, Renato; Scholz, Dominique
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 211 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

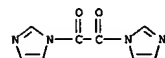
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004209921	A1	20041021	US 2004-823494	20040412
WO 2004091518	A2	20041028	WO 2004-US11328	20040412
WO 2004091518	A3	20041223		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, NG, TD, TG
PRIORITY APPL. INFO.: US 2003-462736P P 20030411
US 2003-505688P P 20030923
OTHER SOURCE(S): MARPAT 141:379809
GI



II

AB Title compds. I [X = (CR3)O-(CR3-CR3)P-(CR32)R-NR52, (CR32)S-R4, (un)substituted mono or bicyclic ring optionally containing N, O or S, etc.; Y = (un)substituted N-containing monocyclic or bicyclic aromatic or partially aromatic moiety; A and R1 = non-interfering substituent provided that two As do not form a ring; R2 and R3 = H or (un)substituted alkyl; R4 = (un)substituted heterocycle or a hetero compound; R5 = H or alkyl; wherein R1 and R2 is not H; and wherein R1 and R2 may be connected to form an addnl. ring if Y does not contain a 2-imidazolyl residue optionally connected to an addnl. ring; q and n independently = 0-4; p = 0-1; o and r independently = 1-4; s = 1-6 provided that if X = (CR3)2-R4, r is at least two if R4 = 2-pyridinyl, quinolinyl, imidazolyl or furan], as well as their pharmaceutically acceptable salts, are prepared and disclosed as having the ability to bind to chemokine receptors, in particular CXCR4. Thus, e.g., II was prepared by reductive amination of 4-[(3-methylpyridin-2-ylmethyl)-amino]-butylcarbamate acid tert-Bu ester (preparation given) with 3-benzylpyrrolidine-2-carbaldehyde. The present invention also relates to methods of using such compds., such as in treating HIV infection and inflammatory conditions such as rheumatoid arthritis. In assays to evaluate inhibition of HIV-1, many compds. of the invention exhibited IC50 values in the range of 0.5nM-5μM. Furthermore, the present invention relates to methods to elevate progenitor and stem cell counts, as well as methods to elevate white blood cell counts, using such compds.
IT RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of pyridine deriva. as CXCR4 chemokine receptor binding compds.)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediy)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 6 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:589134 CAPLUS
DOCUMENT NUMBER: 141:116131
TITLE: Peroxyoxalate chemiluminescence compound and system
INVENTOR(S): Lee, Ji Hoon; Schlautman, Mark A.; Carraway, Elizabeth R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

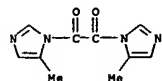
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004142358	A1	20040722	US 2003-705586	20031110
PRIORITY APPLN. INFO.:			US 2002-425432P	P 20021112

AB An unstable, Me-substituted (1,1'-oxalyl di-imidazole) mol. capable of accelerating the rate at which a material attains maximum chemiluminescence when reacted hydrogen peroxide in the presence of a fluorophore and a method to synthesize such mols.

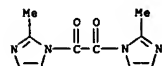
IT 505093-68-5P 505093-69-6P
RI: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(fast peroxyoxalate chemiluminescence compound and system)

RN 505093-68-5 CAPLUS

CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis(5-methyl- (9CI) (CA INDEX NAME)



RN 505093-69-6 CAPLUS
CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis(2-methyl- (9CI) (CA INDEX NAME)



IT 18637-83-7, 1,1'-Oxalyldiimidazole
RI: ARU (Analytical role, unclassified); ANST (Analytical study)
(fast peroxyoxalate chemiluminescence compound and system)

RN 18637-83-7 CAPLUS

CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

L12 ANSWER 7 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:428917 CAPLUS
DOCUMENT NUMBER: 140:431154
TITLE: Quinoxaline derivative used in organic semiconductor electroluminescent device
INVENTOR(S): Shitagaki, Satoko; Yamazaki, Hiroko; Seo, Satoshi
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004043937	A1	20040527	WO 2003-JP13764	20031028

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, OS, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

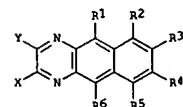
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2005003232 A1 20050106 US 2003-706291 20031113

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 140:431154 JP 2002-329251 A 20021113

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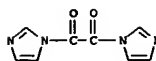
AB The invention relates to a quinoxaline derivative that has excellent electron transporting capability and hole blocking properties and can be formed into a film without crystallization. In particular, the invention provides a quinoxaline derivative represented by I [X and Y = aryl and heterocyclic residues; R1-6 = H, alkyl, alkoxy, aryl and heterocyclic], suited for use in making an electroluminescent device.

IT 18637-83-7
RI: RCT (Reactant); RACT (Reactant or reagent)
(quinoxaline derivative used in organic semiconductor electroluminescent device)

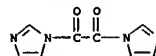
RN 18637-83-7 CAPLUS

CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

L12 ANSWER 6 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L12 ANSWER 7 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2004:346279 CAPLUS

DOCUMENT NUMBER: 141:89342

TITLE: Novel lopinavir analogs incorporating heterocyclic replacements of six-member cyclic urea-synthesis and structure-activity relationships
 AUTHOR(S): Sham, Hing L.; Betebeuner, David A.; Rosenbrook, William H.; Herring, Thomas; Saldívar, Ayda; Vasavanonda, Sudthida; Plattner, Jacob J.; Norbeck, Daniel W.

CORPORATE SOURCE: Pharmaceutical Discovery, Abbott Laboratories, Abbott Park, IL, 60064-6101, USA
 SOURCE: Bioorganic & Medicinal Chemistry Letters (2004), 14(10), 2643-2645

CODEN: BMCLEB; ISSN: 0960-894X

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

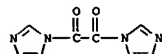
OTHER SOURCE(S): CASREACT 141:89342

AB The HIV protease inhibitor ABT-378 (lopinavir) has a six-member cyclic urea in the P-2 position. A series of analogs in which the six-member cyclic urea is replaced by various heterocycles was synthesized via peptide coupling and the structure-activity relationships were explored.

IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 inhibitors (preparation of pseudopeptides lopinavir analogs as HIV protease and anti-AIDS agents and their structure-activity relationships)

RN 18637-83-7 CAPLUS

CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2003:970882 CAPLUS

DOCUMENT NUMBER: 140:177187

TITLE: Identification of Human Glutaminy Cyclase as a Metalloenzyme: Potent Inhibition by Imidazole Derivatives and Heterocyclic Chelators
 AUTHOR(S): Schilling, Stephan; Niestroj, Andre J.; Rahfeld, Jens-Ulrich; Hoffmann, Torsten; Vermann, Michael; Zunkel, Katrin; Wasternack, Claus; Demuth, Hans-Ulrich
 CORPORATE SOURCE: Probiobio Aktiengesellschaft, Leibniz Institute for Plant Biochemistry, Halle/Saale, 06120, Germany
 SOURCE: Journal of Biological Chemistry (2003), 278(50), 49773-49779

CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

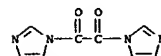
LANGUAGE: English

AB Human glutaminy cyclase (QC) was identified as a metalloenzyme as suggested by the time-dependent inhibition by the heterocyclic chelators 1,10-phenanthroline and dipicolinic acid. The effect of EDTA on QC catalysis was negligible. Inactivated enzyme could be fully restored by the addition of Zn²⁺ in the presence of equimolar concns. of EDTA. Little reactivation was observed with Co²⁺ and Mn²⁺. Other metal ions such as K⁺, Ca²⁺, and Ni²⁺ were inactive under the same conditions. Addnl., imidazole and imidazole derivs. were identified as competitive inhibitors of QC. An initial structure activity-based inhibitor screening of imidazole-derived compds. revealed potent inhibition of QC by imidazole N-1 derivs. Subsequent data base screening led to the identification of two highly potent inhibitors, 3-[3-(1H-imidazol-1-yl)propyl]-2-thioxoimidazolidin-4-one and 1,4-bis-(imidazol-1-yl)-methyl-2,5-dimethylbenzene, which exhibited resp. Ki values of 818 and 295 nM. The binding properties of the imidazole derivs. were further analyzed by the pH dependence of QC inhibition. The kinetically obtained pKa values of 6.94, 6.93, and 5.60 for imidazole, methylimidazole, and benzimidazole, resp., match the values obtained by titrimetric pKa determination, indicating the requirement for an unprotonated nitrogen for binding to QC. Similarly, the pH dependence of the kinetic parameter Km for the QC-catalyzed conversion of H-Gln-7-amino-4-methylcoumarin also implies that only N-terminally unprotonated substrate molcs. are bound to the active site of the enzyme, whereas turnover is not affected. The results reveal human QC as a metal-dependent transferase, suggesting that the active site-bound metal is a potential site for interaction with novel, highly potent competitive inhibitors.

IT 18637-83-7
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (inhibitor: glutaminy cyclase of human inhibition by imidazole derivs. and heterocyclic chelators and reactivation by zinc)

RN 18637-83-7 CAPLUS

CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 2003:823852 CAPLUS

DOCUMENT NUMBER: 140:388065

TITLE: Solvent and pH effects on fast and ultrasensitive 1,1'-oxalyldi(4-methylimidazole) chemiluminescence
 AUTHOR(S): Lee, Ji Hoon; Je, Jongtae; Hur, Jin; Schlautman, Mark A.; Carraway, Elizabeth R.
 CORPORATE SOURCE: Clemson Institute of Environmental Toxicology, Clemson University, Pendleton, SC, 29670, USA
 SOURCE: Analyst (Cambridge, United Kingdom) (2003), 128(10), 1257-1261

CODEN: ANAIAO; ISSN: 0003-2654

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

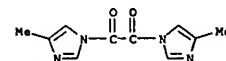
AB Solvent and pH effects on fast and ultrasensitive 1,1'-oxalyldi(4-methylimidazole) chemiluminescence (OD4MI-CL) were studied. The influences of these two factors on the complex OD4MI-CL reaction are discussed within a conceptual prototype for developing aqueous and non-aqueous capillary electrophoresis (ACE and NACE) devices with OD4MI-CL detection. The reaction channel length and OD4MI yield from the reaction between bis(2,4,6-trichlorophenyl) oxalate (TCPO) and 4-methylimidazole in the channel will be influenced by pH, water volume fraction, and cosolvent properties of the solution. Optimum OD4MI-CL efficiency is observed at pH

6.5 when 1-propanol, which has a low dielec. constant ($\epsilon = 20.8$), is used as the NACE solvent in the separation channel. Water ($\epsilon = 80.1$), the solvent in the ACE separation channel, acts similarly to a high dielec. constant organic solvent in NACE because the disadvantages normally associated with TCPO-CL reactions in water disappear due to the faster OD4MI-CL reaction vs. OD4MI decomposition in aqueous solution. Therefore, it is expected that the OD4MI-CL detection system can be used in both NACE and ACE devices without requiring detector modifications. We also conclude that OD4MI-CL detection in NACE and ACE devices will be much more sensitive than the TCPO-CL detection used in current NACE devices.

IT 685880-49-3
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (solvent and pH effects on fast and ultrasensitive 1,1'-oxalyldi(4-methylimidazole) chemiluminescence)

RN 685880-49-3 CAPLUS

CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[4-methyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 11 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:22228 CAPLUS

DOCUMENT NUMBER: 139:296792

TITLE: Fast peroxyoxalate chemiluminescence for minimized analytical separation systems

AUTHOR(S): Lee, Ji Hoon; Je, Jongtae; Schlautman, Mark A.; Carraway, Elizabeth R.

CORPORATE SOURCE: Department of Environmental Toxicology and the Clemson Institute of Environmental Toxicology, Clemson University, Pendleton, SC, 29670, USA

SOURCE: Chemical Communications (Cambridge, United Kingdom) (2003), (2), 270-271

CODEN: CHCOF5; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The maximum intensity, I_{max}, and time required to reach the maximum emission,

t_{max}, for 1-aminopyrene monitored in 1,1'-oxalyldi-4-methylimidazole (ODMI) chemiluminescence (CL) reactions are approx. 61 times higher and 16 times faster than their resp. values for bis(2,4,6-trichlorophenyl)oxalate (TCPO) CL reactions in the presence of imidazole (ImH).

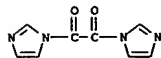
IT 18637-83-7, 1,1'-Oxalyldiimidazole 505093-68-5

505093-68-6

RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses) (fast peroxyoxalate chemiluminescence for minimized anal. separation systems)

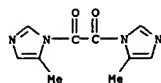
RN 18637-83-7 CAPLUS

CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



RN 505093-68-5 CAPLUS

CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[5-methyl- (9CI) (CA INDEX NAME)



RN 505093-69-6 CAPLUS

CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[2-methyl- (9CI) (CA INDEX NAME)

L12 ANSWER 12 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:22626 CAPLUS

DOCUMENT NUMBER: 137:154626

TITLE: Study of the characteristics of three high-energy intermediates generated in peroxyoxalate chemiluminescence (PO-CL) reactions

AUTHOR(S): Lee, Ji Hoon; Rock, James C.; Park, Seung Bum; Schlautman, Mark A.; Carraway, Elizabeth R.

CORPORATE SOURCE: Occupational Health & Safety Institute, Texas A&M University, College Station, TX, 77843-3133, USA

SOURCE: Journal of the Chemical Society, Perkin Transactions 2 (2002), (4), 802-809

CODEN: JCSPGT; ISSN: 1472-779X

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

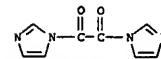
AB Perylene emission intensity generated from peroxyoxalate chemiluminescence (PO-CL) reactions was studied as a function of time and order of reagent addition. Based on 1H-NMR analyses, kinetics of UV absorbance and emission intensity vs. time profiles, we conclude that PO-CL reactions in the presence of imidazole (ImH) can proceed by three distinct reaction pathways depending on how the reagents are mixed together. When bis(2,4,6-trichlorophenyl) oxalate (TCPO) is mixed simultaneously with H₂O₂, ImH and perylene, a slowly decaying emission curve is generated from the interaction between perylene and a high-energy intermediate (i.e., six- or eight-membered cyclic compound) formed by the ImH-catalyzed nucleophilic reaction (TCPO-CL reaction). Upon mixing TCPO simultaneously with ImH and perylene in the absence of H₂O₂, however, distinctly different CL curves of lower intensity are generated from the interaction between perylene and a new, unknown high-energy intermediate formed from the reaction between the aryl oxalate and ImH. Finally, using 1H-NMR, we observed that 1,1'-oxalyldiimidazole (ODI) is also formed from the reaction between TCPO and ImH. When ODI reacts with excess H₂O₂ in the presence of perylene, a higher intensity and relatively fast decaying emission curve is generated (ODI-CL reaction) from the interaction between perylene and the high-energy intermediate produced, which we propose is imidazolyldihydroxydioxetane or 1,2-dioxetanedione.

IT 18637-83-7, 1,1'-Oxalyldiimidazole

RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent) (intermediate; high-energy intermediates generated in peroxyoxalate chemiluminescence (PO-CL) reactions)

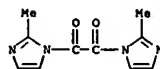
RN 18637-83-7 CAPLUS

CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 11 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



REFERENCE COUNT:

11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 13 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:89548 CAPLUS

DOCUMENT NUMBER: 136:38973

TITLE: Phase-change inks containing benzoyl benzamides

INVENTOR(S): Malhotra, Shadi L.; Goodbrand, H. Bruce

PATENT ASSIGNEE(S): Xerox Corporation, USA

SOURCE: U.S., 14 pp. CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6328793	B1	20011211	US 2000-632190	20000803
			US 2000-632190	20000803

PRIORITY APPLN. INFO.: MARPAT 136:38973

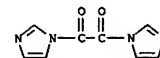
AB Disclosed is an ink composition comprising (a) a benzoyl benzamide compound; (b) a viscosity-modifying benzoyl-group-containing compound; (c) a colorant; and (d) an optional conductivity enhancing agent.

IT 18637-83-7, 1,1'-Oxalyldiimidazole

RL: MOA (Modifier or additive use); USES (Uses) (conductivity-enhancing agent; phase-change inks containing benzoyl benzamides)

RN 18637-83-7 CAPLUS

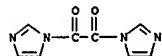
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

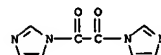
27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 14 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2001:680328 CAPLUS
 DOCUMENT NUMBER: 135:371710
 TITLE: Solid-Phase Synthesis of Substituted Imidazoline-Tethered 2,3-Diketopiperazines, Cyclic Ureas, and Cyclic Thioureas
 AUTHOR(S): Acharya, Achyuta N.; Ostresh, John M.; Houghten, Richard A.
 CORPORATE SOURCE: Torrey Pines Institute for Molecular Studies, San Diego, CA, 92121, USA
 SOURCE: Journal of Combinatorial Chemistry (2001), 3(6), 612-623
 CODEN: JOCHFF; ISSN: 1520-4766
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 135:371710
 AB Efficient methods for the solid-phase synthesis of imidazoline-tethered 2,3-diketopiperazines, cyclic ureas, and cyclic thioureas are described. Following the exhaustive reduction of resin-bound dipeptides derived from orthogonally protected diamino acids, the primary amine of the resulting tetraamines was selectively protected with Dde. The compds. were then selectively cyclized via their secondary amines with three different diimidazole derivs. ((COI)2, COI2, C5Im2). Upon Dde removal, the compds. were selectively N-acylated and dehydratively cyclized with POCl3 to afford the imidazoline-tethered analogs in moderate yield and high purity. These procedures have been extended to prepare mixture-based combinatorial libraries. Details of the selection of building blocks for preparation of the positional scanning libraries based on the "libraries from libraries" approach are discussed.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solid-phase synthesis of substituted imidazoline-tethered 2,3-diketopiperazines, cyclic ureas, and cyclic thioureas)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

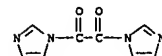


REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 15 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2000:513460 CAPLUS
 DOCUMENT NUMBER: 133:317215
 TITLE: Carbonyl J Derivatives: A New Class of HIV-1 Integrase Inhibitors
 AUTHOR(S): Maurer, Karl; Tang, Ann H.; Kenyon, George L.; Leavitt, Andrew D.
 CORPORATE SOURCE: Department of Laboratory Medicine, University of California, San Francisco, CA, USA
 SOURCE: Bioorganic Chemistry (2000), 28(3), 140-155
 CODEN: BOCHEN; ISSN: 0045-2068
 PUBLISHER: Academic Press
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 133:317215
 AB Integration of a DNA copy of the HIV-1 genome is required for viral replication and pathogenicity, and this highly specific mol. process is mediated by the virus-encoded integrase protein. The requirement for integration, combined with the lack of a known analogous process in mammalian cells, makes integrase an attractive target for therapeutic inhibitors of HIV-1 replication. While many reports of HIV-1 IN inhibitors exist, no such compds. have yet emerged to treat HIV-1 infection. As such, new classes of integrase inhibitors are needed. We have combined mol. modeling and combinatorial chemical to identify and develop a new class of HIV-1 integrase inhibitors, the Carbonyl J [N,N'-bis-2-(5-hydroxy-7-naphthalenesulfonic acid)urea] derivs. This new class includes a number of compds. with sub-micromolar IC50 values for inhibiting purified HIV-1 integrase in vitro. Herein we describe the chemical characteristics that are important for integrase inhibition and cell toxicity within the Carbonyl J derivs. (c) 2000 Academic Press.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (carbonyl J derivs.: a new class of HIV-1 integrase inhibitors)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

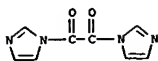


L12 ANSWER 16 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2000:373661 CAPLUS
 DOCUMENT NUMBER: 133:150895
 TITLE: Solid-phase synthesis of substituted 2,3-diketopiperazines from reduced polyamides
 AUTHOR(S): Nefzi, Adel; Giulianotti, Marc A.; Houghten, Richard A.
 CORPORATE SOURCE: Torrey Pines Institute for Molecular Studies, San Diego, CA, 92121, USA
 SOURCE: Tetrahedron (2000), 56(21), 3319-3326
 CODEN: TETRAH; ISSN: 0040-4020
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 133:150895
 AB An efficient method for the solid phase synthesis of 1,6-disubstituted 2,3-diketopiperazine and 1,4,5-trisubstituted 2,3-diketopiperazine derivs. is described. The reduction of resin-bound acylated amino acids or resin-bound acylated dipeptides, followed by treatment with oxalylidimidazole, affords the corresponding diketopiperazines in good yield and high purity. This is an example of a broader approach to the solid phase synthesis of individual heterocyclic compds. using peptides directly or indirectly as starting materials.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (solid-phase synthesis of substituted 2,3-diketopiperazines from reduced polyamides)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

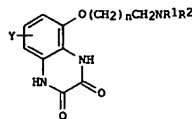
L12 ANSWER 17 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2000:233318 CAPLUS
 DOCUMENT NUMBER: 132:334196
 TITLE: Kinetics of Two Pathways in Peroxyoxalate Chemiluminescence
 AUTHOR(S): Hadd, Andrew G.; Seaber, Anke; Birks, John W.
 CORPORATE SOURCE: Department of Chemistry and Biochemistry and Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado, Boulder, CO, 80309, USA
 SOURCE: Journal of Organic Chemistry (2000), 65(9), 2675-2683
 CODEN: JOCEAH; ISSN: 0022-3263
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB It has been shown that 1,1'-oxalylidimidazole (ODI) is formed as an intermediate in the imidazole-catalyzed reaction of oxalate esters with hydrogen peroxide. Therefore, the kinetics of the chemiluminescence reaction of 1,1'-oxalylidimidazole (ODI) with hydrogen peroxide in the presence of a fluorophore was investigated in order to further elucidate the mechanism of the peroxyoxalate chemiluminescence reaction. The effects of concns. of ODI, hydrogen peroxide, imidazole (ImH), the general-base catalysts lutidine and collidine, and temperature on the chemiluminescence profile and relative quantum efficiency in the solvent acetonitrile were determined using the stopped-flow technique. Pseudo-first-order rate constant measurements were made for concns. of either H2O2 or ODI in large excess. All of the reaction kinetics are consistent with a mechanism in which the reaction is initiated by a base-catalyzed substitution of hydrogen peroxide for imidazole in ODI to form an imidazolyl peracid [Im(CO)2OOH]. In the presence of a large excess of H2O2, this intermediate rapidly decays with both a zero- and first-order dependence on the H2O2 concentration. It is proposed that the zero-order process reflects a cyclization of this intermediate to form a species capable of exciting a fluorophore via the "chemical initiated electron exchange mechanism" (CIEEL), while the first-order process results from the substitution of an addnl. mol. of hydrogen peroxide to the imidazolyl peracid to form dihydroperoxyoxalate, reducing the observed quantum yield. Under conditions of a large excess of ODI, the reaction is more than 1 order of magnitude more efficient at producing light, and the quantum yield increases linearly with increasing ODI concentration. Again, it is proposed that the slow initiating step of the reaction involves the substitution of H2O2 for imidazole to form the imidazolyl peracid. This intermediate may decay by either cyclization or by reaction with another ODI mol. to form a cyclic peroxide that is much more efficient at energy transfer with the fluorophore. The reaction kinetics clearly distinguishes two sep. pathways for the chemiluminescent reaction.
 IT 18637-83-7, 1,1'-Oxalylidimidazole
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
 (kinetics and mechanism of imidazole-catalyzed chemiluminescent reaction of 1,1'-oxalylidimidazole with hydrogen peroxide and elucidation of peroxyoxalate chemiluminescence mechanism)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



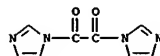
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1999:439321 CAPLUS
DOCUMENT NUMBER: 131:87927
TITLE: Preparation of 5-aminoalkoxy-1,4-dihydroquinoline-2,3-diones
INVENTOR(S): Nelson, James Albert; Shah, Uresh Shantilal; Mewshaw, Richard Eric
PATENT ASSIGNEE(S): American Home Products Corporation, USA
SOURCE: U.S., 6 pp.
CODEN: USXKAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5922715	A	19990713	US 1998-25018	19980217
PRIORITY APPLN. INFO.:			US 1997-38683P	P 19970218
OTHER SOURCE(S):	MARPAT	131:87927		



AB Title compds. I; [R1, R2 = H, alkyl, (CH2)mAr; Ar = (substituted) Ph, naphthyl, thienyl; NR1R2 = 1,2,3,4-tetrahydroquinolin-1-yl, 1,2,3,4-tetrahydroisoquinolin-2-yl; m = 1-5; n = 1, 2; Y = H, alkyl, alkoxy], were prepared as dopamine D2 agonists useful in the treatment of psychoses and Parkinson's disease. Thus, N-benzyl-N-(2-(2,3-dioxo-1,2,3,4-tetrahydroquinolin-5-yloxy)ethyl)-2,2,2-trifluoroacetate (preparation given) was refluxed with K2CO3 in MeOH/H2O to give 5-(2-benzylaminoethoxy)-1,4-dihydroquinoline-2,3-dione. The latter displaced 3H-quinpirole from the dopamine autoreceptor with IC50 = 20.8 nM.
IT 18637-83-7
RL: RCT (Reactant); RACT (Reactant or reagent)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1999:375783 CAPLUS
DOCUMENT NUMBER: 131:47161
TITLE: Redox and electrically conducting polyquinoid and related polymers for use as cathode materials in electrochemical generators, especially lithium batteries
INVENTOR(S): Armand, Michel; Michot, Christophe; Ravet, Nathalie
PATENT ASSIGNEE(S): Acep Inc., Can.; Centre National de la Recherche Scientifique (CNRS); Universite de Montreal
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXX02
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9928984	A1	19990610	WO 1998-CA1125	19981202
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, BG, BR, BU, CF, CG, CI, CH, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2223562	AA	19990602	CA 1997-2223562	19971202
CA 2279396	AA	19990610	CA 1998-2279396	19981202
AU 9914779	A1	19990616	AU 1999-14779	19981202
EP 966769	A1	19991229	EP 1998-958756	19981202
EP 966769	B1	20040317		
R: DE, FR, GB, IT				
JP 2001512526	T2	20010821	JP 1999-529560	19981202
US 6743877	B1	20040601	US 1999-361962	19990728
US 2003118877	A1	20030626	US 2002-288575	20021106
US 2004202930	A1	20041014	US 2004-823630	20040414
PRIORITY APPLN. INFO.:			CA 1997-2223562	A 19971202
			WO 1998-CA1125	W 19981202
			US 1999-361962	A3 19990728
			US 2002-288575	B1 20021106

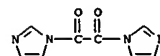
AB Redox compns., composed of redox polymers and conducting polymers, having at least one oxidation state, for use as electrode materials, especially for lithium batteries, are of general structure [R2-(C(X)-R1)]p-q-R3-[n-2p]M, in which: (1) M is an alkali metal, alkaline earth metal, transition metal, or rare earth metal cation, organometallic cation, an organic cation, a repeating unit of an oxidized conjugated cationic polymer, or a cation formed from monomeric or polymeric units (e.g., with addnl. redox character), (2) X = O, NCH, or C(CN)2, (3) Z = CY- or N- (Y = O, S, NCH, C(CN)2; and Y = S24 when X = O), (3) R = absent, O, S, NH2, -(C.tpbond.C)r, -(V-W)r (V = CR6or N; r = 1-12; R6 = H, halogen, CN, Cl-12-alkyl, C2-12-alkenyl, or C6-14-aryl, possibly substituted by oxa, aza, or thia); (4) R2 and R3 are absent or a divalent hydrocarbyl, optionally substituted by aza, oxa, or thia; and (5) q = 0-pr p = 1-5; n = 1-104. The novel electrode materials are especially derived from polyquinoid ionic compds. Suitable compds. include rhodizonic acid salts; 1,2,4,5,6,8-hexahydroxyanthraquinone salts; ellagic acid salts; thiocyanic acid polymers or poly(1-cyano-2-mercaptoacetylene) polymers containing the units derived from ketopyridines; an alternating polymer containing

benzoquinone and pyrazine units; dithiosquaric acid salts; 1,5-dihydropyrimido(5,4d)pyrimidine-2,4,6,8(3H,7H)-tetrone acid salts; a dicarboxylic acid salt in which the groups are linked by conjugated bonds and polyamides derived from a dicarboxylic acid in which the groups are linked by conjugated bonds. The polymers can be partially reduced.
IT 227322-18-IDP, reduced 227322-18-1P 227322-20-SP
RL: DEV (Device component use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (cathodes; redox and elec. conducting polyquinoid and related polymers for use as cathode materials in lithium batteries)
RN 227322-18-1 CAPLUS
CN Ethanamine, 2,2'-(1,2-ethanediyl)bis[(oxy)]bis[N-methyl-, polymer with 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[1H-imidazole] (9CI) (CA INDEX NAME)

CH 1
CRN 22366-98-9
CMF C8 H20 N2 O2

MeNH-CH2-CH2-O-CH2-CH2-O-CH2-CH2-NHMe

CH 2
CRN 18637-83-7
CMF C8 H6 N4 O2

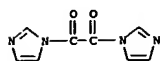


RN 227322-18-1 CAPLUS
CN Ethanamine, 2,2'-(1,2-ethanediyl)bis[(oxy)]bis[N-methyl-, polymer with 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[1H-imidazole] (9CI) (CA INDEX NAME)

CH 1
CRN 22366-98-9
CMF C8 H20 N2 O2

MeNH-CH2-CH2-O-CH2-CH2-O-CH2-CH2-NHMe

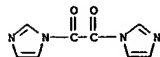
CH 2
CRN 18637-83-7
CMF C8 H6 N4 O2



RN 227322-20-5 CAPLUS
CN Ethanamine, 2,2'-oxybis[N-methyl-, polymer with 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[1H-imidazole] (9CI) (CA INDEX NAME)

CM 1

CRN 18637-83-7
CMF C8 H6 N4 O2



CM 2

CRN 2620-27-1
CMF C6 H16 N2 O

MeNH-CH₂-CH₂-O-CH₂-CH₂-NMe

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1998:678087 CAPLUS

DOCUMENT NUMBER: 130:49334

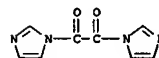
TITLE: Determination of C-21 Ketosteroids in Serum Using Trifluoromethanesulfonic Acid Catalyzed Precolumn Dansylation and 1,1'-Oxalyldiimidazole Postcolumn Peroxyoxalate Chemiluminescence Detection
AUTHOR(S): Appelblad, Patrik; Jonsson, Tobias; Backstrom, Torbjorn; Irgum, Knut
CORPORATE SOURCE: Department of Analytical Chemistry, Ume University, Ume, S-901 87, Swed.
SOURCE: Analytical Chemistry (1998), 70(23), 5002-5009
CODEN: ANCHAM; ISSN: 0003-2700
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new procedure for the quantitation of C-21 ketosteroids using trifluoromethanesulfonic acid-catalyzed precolumn dansylation and coupled column liquid chromatog. separation, followed by postcolumn 1,1'-oxalyldiimidazole peroxyoxalate chemiluminescence detection is presented. In the simultaneous optimization of chromatog. resolution and chemiluminescence intensity, a coupled column chromatog. system and a stopped-flow system were used. An eluent containing 20 mM phosphate buffer

at pH 6.7 accomplished an efficient separation of 3 α -hydroxy-5 β -pregnan-20-one from a mixture containing 10 C-21 ketosteroids. Phosphate buffer

also proved to be the most advantageous, among the six buffers tested, for sensitive detection. Exptl. design and multivariate data anal. were used to characterize and optimize the postcolumn reaction chemical in the chromatog. system. A valid full factorial design with excellent predictability showed that the flow rates for both 1,1'-oxalyldiimidazole and hydrogen peroxide were the factors most strongly affecting the sensitivity of the system. The theor. plate nos. were above 11,000 for all 10 dansylated ketosteroids. The 3 α detection limit estimated from 3 α -hydroxy-5 β -pregnan-20-one calibration curve data was 1.6 pmol (n = 4, 125 μ L injected) and spiked serum containing 0-74 pmol of this compound showed overall recoveries of 73:91 (n = 12). Quantitation of 3 α -hydroxy-5 β -pregnan-20-one was finally carried out on 45 serum samples and the results compared to those from a RIA method. The data acquired with the procedure described in this work compare well with the results from RIA, which confirms the reliability of the new anal. procedure.

IT 18637-83-7, 1,1'-Oxalyldiimidazole
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (determination of C-21 ketosteroids in serum using trifluoromethanesulfonic acid catalyzed precolumn dansylation and 1,1'-oxalyldiimidazole postcolumn peroxyoxalate chemiluminescence detection)
RN 18637-83-7 CAPLUS
CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1998:269556 CAPLUS

DOCUMENT NUMBER: 128:294489

TITLE: Stopped-flow kinetics investigation of the imidazole-catalyzed peroxyoxalate chemiluminescence reaction

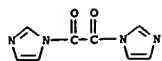
AUTHOR(S): Hadd, Andrew G.; Robinson, Alex L.; Rowle, Kathy L.; Birks, John W.
CORPORATE SOURCE: Department of Chemistry and Biochemistry and Cooperative Institute for Research in Environmental Sciences (CIRES), University of Colorado, Boulder, CO, 80309-0216, USA
SOURCE: Journal of Organic Chemistry (1998), 63(9), 3023-3031
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The stopped-flow technique was used to study the temperature-dependent kinetics

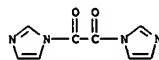
of the imidazole-catalyzed peroxyoxalate chemiluminescence reaction in order to further elucidate its mechanism. Pseudo-1st-order rate consts. were obtained from the chemiluminescence intensity-vs.-time profiles for the sequential reaction model X \rightarrow Y \rightarrow Z over a wide range of initial concns. of each of the following reagents: bis(2,4,6-trichlorophenyl) oxalate (TCPO), imidazole (ImH) and H₂O₂. These measurements were complemented by UV-absorbance measurements of the kinetics of the step X \rightarrow Y. For both reaction conditions pseudo-1st-order in TCPO ([ImH], [H₂O₂] \gg [TCPO]) and pseudo-1st-order in H₂O₂ ([ImH] \gg [TCPO] \gg [H₂O₂]), the 1st step of the reaction is nucleophilic substitution by 2 ImH mols. to form 1,1'-oxalyldiimidazole (ODI). Under conditions of excess TCPO in the concentration range 0.075-0.25 mM, the Y \rightarrow Z reaction probed the subsequent reaction of ODI with H₂O₂ to form the imidazolyl peracid intermediate, ImCOCO₂OH (I). For excess H₂O₂ concns. in the range 2.5-15 mM, the reaction of H₂O₂ with ODI is fast, and the Y \rightarrow Z step of the sequential reaction model describes subsequent reactions of I. An important unexpected finding necessary for interpreting the kinetics of this reaction is that under conditions of a large excess of H₂O₂ the faster rise of the chemiluminescence signal corresponds to the 2nd step of the reaction (Y \rightarrow Z), and the slower fall of the signal corresponds to the 1st step (X \rightarrow Y). Lutidine and collidine, amine bases of similar aqueous pK_a as ImH, displayed very little catalytic effect on the peroxyoxalate-chemiluminescence reaction in comparison to ImH, corroborating the conclusion that nucleophilic catalysis with formation of ODI as an intermediate constitutes the principal reaction pathway under conditions of both excess oxalate ester and excess H₂O₂. ImH quenches the quantum yield of the reaction, a result that can be well explained by catalysis of the decomposition of the key energy-transfer intermediate.

IT 18637-83-7, 1,1'-Oxalyldiimidazole
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); FORM (Formation, nonpreparative); PROC (Process); RACT (Reactant or reagent) (stopped-flow kinetics study of imidazole-catalyzed peroxyoxalate chemiluminescence reaction)
RN 18637-83-7 CAPLUS
CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



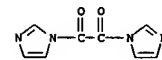
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1998:159844 CAPLUS
DOCUMENT NUMBER: 128:294483
TITLE: A two-intermediate model for imidazole-promoted peroxyoxalate chemiluminescence
AUTHOR(S): Neuvonen, Helmi
CORPORATE SOURCE: Department of Chemistry, University of Turku, Turku, FIN-20013, Finland
SOURCE: Journal of Bioluminescence and Chemiluminescence (1997), 12(5), 241-248
CODEN: JBCEH7; ISSN: 0884-3996
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A mechanism is proposed for imidazole-catalyzed peroxyoxalate chemiluminescence. The reaction model includes a sequential formation of 1-oxalylimidazole and 1,1'-oxalyldiimidazole as light-producing reaction intermediates. The suggestion is supported by the kinetic data obtained for the reaction of imidazole with bis(4-nitrophenyl) oxalate and on the recently reported ability of 1,1'-oxalyldiimidazole to function as an efficient chemiluminescence reagent. The relative contributions of different catalytic pathways and hydrolytic side-reactions are discussed.
IT 18637-83-7, 1,1'-Oxalyldiimidazole
RL: PMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1997:811700 CAPLUS
DOCUMENT NUMBER: 128:112462
TITLE: Peroxyoxalate chemiluminescence in aqueous solutions: coupling of immobilized enzyme reactors and 1,1'-oxalyldiimidazole chemiluminescence reaction to flow-injection analysis and liquid chromatographic systems
AUTHOR(S): Emtborg, Malin; Irgum, Knut; Gooljer, Cees; Brinkman, Udo A. Th.
CORPORATE SOURCE: Department of Analytical Chemistry, Umea University, S-901 87 Umea, Swed.
SOURCE: Analytica Chimica Acta (1997), 357(1-2), 111-118
CODEN: AACAAM; ISSN: 0003-2670
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A highly sensitive method for the determination of enzymically generated hydrogen peroxide in flow-injection anal. (FIA) and liquid chromatog. (LC) has been developed. A dual-line flow system is used, one carrier (or eluent) delivering the analyte and the other one the chemiluminescent reagent 1,1'-oxalyldiimidazole (ODI). The results show that the composition of the analyte flow line is not critical for the chemiluminescence detection step; even purely aqueous buffers, as generally applied if immobilized enzyme reactors (IMERs) are involved in FIA and LC, can be used without loss of sensitivity. IMERs containing either glucose oxidase or acetylcholine esterase/choline oxidase were incorporated in this flow line and favorable detection limits (S/N = 3) were obtained, i.e. 3 nM for glucose and 50 nM for acetylcholine and choline. The performance of the approach in real-sample anal. was tested by determining glucose and choline in urine samples.
IT 18637-83-7, 1,1'-Oxalyldiimidazole
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (peroxyoxalate chemiluminescence in aqueous solns. and flow-injection anal.)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

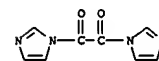


REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

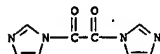
ACCESSION NUMBER: 1997:761862 CAPLUS
DOCUMENT NUMBER: 128:55448
TITLE: Photothermographic material
INVENTOR(S): Yamada, Kozaburoh; Kubo, Toshiaki; Hirano, Shigeo
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 102 pp.
CODEN: EPXKDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 807850	A1	19971119	EP 1997-108057	19970516
EP 807850	B1	20001004		
R: DE, FR, GB				
JP 09304870	A2	19971128	JP 1996-148111	19960517
JP 09304871	A2	19971128	JP 1996-148115	19960517
JP 09304872	A2	19971128	JP 1996-148116	19960517
JP 10031282	A2	19980203	JP 1996-280356	19960930
US 6306574	B1	20011023	US 1997-857459	19970516
PRIORITY APPLN. INFO.:				
			JP 1996-148111	A 19960517
			JP 1996-148113	A 19960517
			JP 1996-148115	A 19960517
			JP 1996-148116	A 19960517
			JP 1996-280356	A 19960930

OTHER SOURCE(S): MARPAT 128:55448
AB In a photothermog. material comprising an organic silver salt, a silver halide, and a reducing agent, a hydrazine derivative represented by the formula R1GN(A1)N(A2)R2 (R1 = alkyl, aryl, alkoxy, aryloxy, amino, alkylamino, arylamino, heterocyclyl, heterocyclylamino, or hydrazino; R2 = an aliphatic group; G = COCO, SO2, SO, P(O) (R3), thiocarbonyl, or iminomethylene; R3 = a group similar to R1; A1, A2 = H, acyl, alkylsulfonyl, or arylsulfonyl) is used as a nucleating agent. The material has high sensitivity, high Dmax and good image quality.
IT 18637-83-7P
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation and reaction in preparing hydrazine derivative nucleating agent for photothermog. materials)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

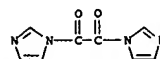


L12 ANSWER 25 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1997:283785 CAPLUS
 DOCUMENT NUMBER: 126:350956
 TITLE: Influence of Imidazole and Bis(trichlorophenyl) Oxalate in the Oxalyldiimidazole Peroxyoxalate Chemiluminescence Reaction
 AUTHOR(S): Estaborg, Malin; Ponten, Einar; Irgum, Knut
 CORPORATE SOURCE: Department of Analytical Chemistry, Umeaa University, Umeaa, S-901 87, Swed.
 SOURCE: Analytical Chemistry (1997), 69(11), 2109-2114
 CODEN: ANCHAM; ISSN: 0003-2700
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The complex role of imidazole when used as a catalyst in the bis(2,4,6-trichlorophenyl) oxalate (TCPO) peroxy oxalate chemiluminescence (PO-CL) reaction is explained by the transient formation and subsequent degradation of 1,1'-oxalyldiimidazole (ODI). When ODI was used directly as PO-CL reagent, the stability was improved by addition of TCPO as an "imidazole sponge", since ODI is rapidly decomposed in the presence of imidazole. In this way, the imidazole-catalyzed degradation of ODI was hindered efficiently. The stability of ODI was also influenced by the storage vessel material. Polymeric bottles were more suitable than glass containers. A comparison was made between the traditionally used reagent TCPO/imidazole (mixed online for formation of ODI) and the new reagent combination ODI-TCPO (premixed) with respect to sensitivity, noise, and background.
 IT 18637-83-7, 1,1'-Oxalyldiimidazole
 RL: ARG (Analytical reagent use); PMU (Formation, unclassified); PEP (Physical, engineering or chemical process); ANST (Analytical study); FORM (Formation, nonpreparative); PHOC (Process); USES (Uses)
 (imidazole and bis(trichlorophenyl) oxalate in oxalyldiimidazole peroxyoxalate chemiluminescence)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



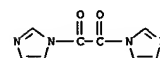
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 26 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1996:676068 CAPLUS
 DOCUMENT NUMBER: 126:26058
 TITLE: Solid Phase Chemiluminescence Detection Reactors Based on in Situ Polymerized Methacrylate Materials
 AUTHOR(S): Ponten, Einar; Viklund, Camilla; Irgum, Knut; Bogen, Stein Torer; Lindgren, Aasa Nson
 CORPORATE SOURCE: Department of Chemistry, Umeaa University, Umeaa, S-901 87, Swed.
 SOURCE: Analytical Chemistry (1996), 68(24), 4389-4396
 CODEN: ANCHAM; ISSN: 0003-2700
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB In situ photopolymerized, macroporous poly(glycidyl methacrylate-co-trimethylolpropane trimethacrylate) materials, which were prepared in a full factorial exptl. synthesis design, were studied as supports in solid phase chemiluminescence detection reactors. The reactors based on in situ polymerized supports showed higher light generation efficiency than packed bed reactors when evaluated in a flow system based on 1,1'-oxalyldiimidazolyl peroxyoxalate chemiluminescence detection of hydrogen peroxide, with 3-aminofluoranthene (3-AFA) as the immobilized light emitter. The results were correlated with the phys. characteristics of the materials, and the efficiency was found to correlate with the amount of accessible reactive groups. A lower functionalization d. increases the peak area sensitivity for hydrogen peroxide in the flow system. This is explained by inner filtering. The peak height sensitivities were less influenced, indicating that the total system efficiency was limited by homogeneous reaction kinetics. The introduction of a spacer to mimic pseudosolr. conditions of the bound 3-AFA moiety decreases the light generation ability.
 IT 18637-83-7, 1,1'-Oxalyldiimidazole
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (hydrogen peroxide determination by peroxyoxalate chemiluminescence using flow system based on polymer supported aminofluoranthene light emitter)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

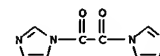


REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 27 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1996:629204 CAPLUS
 DOCUMENT NUMBER: 125:264954
 TITLE: Characterization of bromonidine metabolism with rat, rabbit, dog, monkey and human liver fractions and rabbit liver aldehyde oxidase
 AUTHOR(S): Acheampong, A. A.; Chien, D. -S.; Lam, S. J.; Vekich, S. J.; Breaux, A.; Usansky, J.; Harcourt, D.; Munk, S. A.; Nguyen, H.; et al.
 CORPORATE SOURCE: Department of Pharmacokinetics, Allergan, Irvine, CA, 92713, USA
 SOURCE: Xenobiotica (1996), 26(10), 1035-1055
 CODEN: XENOBH; ISSN: 0049-8254
 PUBLISHER: Taylor & Francis
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The in vitro metabolism of [14C]bromonidine by rat, rabbit, dog, monkey and human liver fractions was studied to assess any species differences. In vitro metabolism by rabbit liver aldehyde oxidase and human liver slices, and in vivo metabolism in rats were also investigated. The hepatic and urinary metabolites were characterized by liquid chromatog. and mass spectrometry. Up to 7, 6, 11 and 14 metabolites were detected in rat liver S9 fraction, human liver S9 fraction, human liver slices and rat urine, resp. Rabbit liver aldehyde oxidase catalyzed the metabolism of bromonidine to 2-oxobromonidine and 3-oxobromonidine, and further oxidation to 2,3-dioxobromonidine. Menadione inhibited the liver aldehyde oxidase-mediated oxidation. Hepatic oxidation of bromonidine to 2-oxobromonidine, 3-oxobromonidine, and 2,3-dioxobromonidine was a major pathway in all the species studied, except the dog, whose prominent metabolites were 4',5'-dehydrobromonidine and 5-bromo-6-guanidinoquinoxaline. These results indicate extensive hepatic metabolism of bromonidine and provide evidence for aldehyde oxidase involvement in bromonidine metabolism. The species differences in hepatic bromonidine metabolism are likely related to the low activity of dog liver aldehyde oxidase. The principal metabolic pathways of bromonidine are alpha(N)-oxidation to 2,3-dioxobromonidine, and oxidative cleavage of the imidazoline ring to give 5-bromo-6-guanidinoquinoxaline.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with bromoguanidinoquinoxaline)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



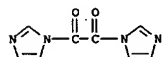
L12 ANSWER 28 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1996:619043 CAPLUS
 DOCUMENT NUMBER: 125:337385
 TITLE: Direct and Selective Determination of Atmospheric Gaseous Hydrogen Peroxide by Diffusion Scrubber and 1,1'-Oxalyldiimidazole Chemiluminescence Detection
 AUTHOR(S): Stigbrand, Malin; Karlsson, Anders; Irgum, Knut
 CORPORATE SOURCE: Department of Analytical Chemistry, University of Umeaa, Umeaa, S-901 87, Swed.
 SOURCE: Analytical Chemistry (1996), 68(22), 3945-3950
 CODEN: ANCHAM; ISSN: 0003-2700
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB An online method is described for the determination of atmospheric H2O2, collected by a diffusion scrubber and detected in a flow system using 1,1'-oxalyldiimidazole peroxyoxalate chemiluminescence. Interferences from the organic peroxides most abundantly occurring in the atmospheric (Me hydroperoxide and hydroxymethyl hydroperoxide (HMHP)) were studied and showed that the method had a selective response for H2O2. The pH-dependent dissociation rate of HMHP to H2O2 and HCHO was estimated and could be controlled by a buffered scrubber liquid (pH 5.0) to eliminate the contribution of H2O2 from dissociated HMHP. The linearity of the response was excellent in the tested interval from the detection limit (23 pptv) to 3.37 ppbv. The time resolution was high, with an injection throughput of 120/h. The applicability of the technique was assessed by measurement of the atmospheric H2O2 concentration outside the laboratory over a period of 22 h.
 IT 18637-83-7, 1,1'-Oxalyldiimidazole
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (direct and selective determination of atmospheric gaseous hydrogen peroxide by diffusion scrubber and oxalyldiimidazole chemiluminescence detection)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 29 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19503825	A1	19960404	DE 1995-19503825	19950206
CA 2200358	AA	19960411	CA 1995-2200358	19950919
WO 9610572	A1	19960411	WO 1995-KP3686	
V: AU, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, MX, NO, NZ, PL, RO, SG, SI, SK, UA, US				
RU: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LJ, MK, NL, PT, SE				
AU 9536506	A1	19950424	AU 1995-36506	19950919
EP 783506	A1	19970716	EP 1995-934074	19950919
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LJ, LU, NL, PT, SE				
CN 1159807	A	19970917	CN 1995-195396	19950919
CN 1046518	B	19991117		
BR 9509055	A	19980623	BR 1995-9055	19950919
JP 10513435	T2	19981222	JP 1995-511334	19950919
HU 73969	A2	19961028	HU 1995-2847	19950929
CA 3508208	A	19970412	CA 1995-3508208	19950929
US 6121265	A	20000919	US 1997-80910	19970318
NO 9701424	A	19970522	NO 1997-1424	19970325
FI 9701317	A	19970327	FI 1997-1317	19970327

OTHER SOURCE(S): MARPAT 125:33685
 GI For diagram(s), see printed CA Issue.
 AB The title compds. [1: A 5-membered heterocycle; B = direct bond, alkylene; R1 = H (un)branched alkyl, CF3, NO2, (un)substituted Ph, pyridyl, (un)substituted thienyl; R2 = H, alkyl, (dialkylamino)alkyl; R3 = Cl, Br, CF3, CN, NO2; R4, R5 = substituents], useful as antiepileptics (no data), anxiolytics (no data), and antidepressants (no data), are prepared. Thus, Et, 4,5-dihydro-1-methyl-8-(pyrrol-1-yl)-7-trifluoromethyl-4-oxoimidazo[1,2-a]quinoxaline-2-carboxylate, m.p. 290-295°, was prepared in 6 steps from 2-fluoro-4-(trifluoromethyl)nitrobenzene. 1963-83-73
 IT RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of substituted imidazo[1,2-a]quinoxalinone CNS agents)
 RN 1963-83-73 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



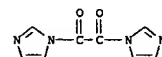
L12 ANSWER 31 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:969418 CAPLUS
 DOCUMENT NUMBER: 124:202946
 TITLE: Preparation of sulfate esters of sugar alcohols for
 the treatment of arteriosclerotic changes in the
 vascular walls.
 INVENTOR(S): Chucholowski, Alexander; Fingerle, Juergen; Iberg,
 Niggi; Maerki, Hans Peter; Mueller, Rita; Pech,
 Michael; Rouge, Marianne; Schmid, Gerard; Tschopp,
 Thomas; Vessel, Hans Peter
 PATENT ASSIGNEE(S): F. Hoffmann-La Roche AG, Switz.
 SOURCE: Eur. Pat. Appl., 42 pp.
 CODEN: EPXXXXW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

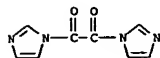
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 663391	A1	19950719	EP 1995-100180	19950109
EP 663391	B1	19970409		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
US 5521168	A	19950110	US 1995-368519	19950104
CA 2139720	AA	19950715	CA 1995-2139720	19950106
ZA 9500086	A	19950720	ZA 1995-86	19950106
AU 9510106	A1	19950727	AU 1995-10106	19950109
AU 685196	B2	19980115		
HU 72412	A2	19960429	HU 1995-52	19950109
AT 154146	A	19970415	AT 1995-100180	19950109
ES 2101583	T3	19970701	ES 1995-100180	19950109
IL 112284	A1	19981030	IL 1995-112284	19950109
FI 95001127	A	19950715	FI 1995-127	19950111
CN 1109809	A	19951011	CN 1995-101166	19950111
CN 1043349	B	19950512		
RU 2139854	C1	19991020	RU 1995-100773	19950111
NO 9500137	A	19950717	NO 1995-137	19950113
JP 07206803	B2	19950808	JP 1995-3729	19950113
JP 2862489	B2	19950303		
FI 180273	B1	20010131	PL 1995-306797	19950113
BR 95000996	A	19951031	BR 1995-96	19950113
			CH 1994-114	19940114

PRIORITY APPIN. INFO.:

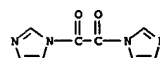
OTHER SOURCE(S): CASREACT 124:202946; MARPAT 124:202946
 AB AX (CH2)mS(CH2)pXA [A = sugar alc. residue (derivative),
 triis(oxymethyl)methyl; 2l of the A OH groups are esterified
 with HS2O4;]X = NRICO, NIKONHE, NHCSNH, NH2SO, NRI, Or m, p = 0, 1; R1 =
 H, alkyl, hydroxyalkyl; B = system of conjugated multiple bonds);
 prepared thus, (2)-(3-[3-biphenyl-4-yl-oxymethyl]-5-[(2)-(3-
 carboxyacryloylaminophenyl)carbamoyl]acrylic acid in DMF was treated
 successively with 4-methylmorpholine, 2-chloro-4,6-dimethoxy-1,3,5-
 triazine, and D-glucamine to give (2)-butenedioic acid
 (2)-(3-biphenyl-4-yl-oxymethyl)-5-(3-D-glucit-1-
 ylcabamoylacryloylaminophenyl)amido)-D-glucit-1-ylamide, which was
 converted to (2)-butenedioic acid (2)-(3-biphenyl-4-yl-oxymethyl)-5-(3-
 (2,4,5,6-penta-O-sulfo-2-O-glucit-1-ylcabamoylacryloylaminophenyl)amido)-
 (2,4,5,6-penta-O-sulfo-2-O-glucit-1-ylamide). The latter had 2.2 times
 the antiproliferative activity of heparin without showing appreciable
 anticoagulative activity.
 IT 18637-83-7
 R1: RCT (Reactant); RACT (Reactant or reagent)



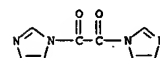
L12 ANSWER 31 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 (prepn. of sulfate esters of sugar alcs. for the treatment of
 arteriosclerotic changes in the vascular walls)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



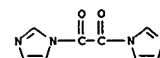
L12 ANSWER 32 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1995:570274 CAPLUS
 DOCUMENT NUMBER: 123:32449
 TITLE: Neutral hydrolysis and imidazole-catalyzed decomposition of bis(4-nitrophenyl) oxalate. 1,1'-Oxalyldiimidazole as an intermediate
 AUTHOR(S): Neuvonen, Heini
 CORPORATE SOURCE: Dep. Chem., Univ. Turku, Turku, FIN-20500, Finland
 SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1995), (5), 945-9
 CODEN: JCPKDH; ISSN: 0300-9580
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Neutral hydrolysis and imidazole-catalyzed decomposition of a peroxyoxalate chemiluminescence reagent type compound, bis(4-nitrophenyl) oxalate (4-NPO), have been studied in acetonitrile and in acetonitrile-water mixts. For comparison, the rate coeffs. for the neutral hydrolysis of 4-nitrophenyl dichloroacetate have also been measured. The first step of the neutral hydrolysis of 4-NPO apparently proceeds by the BAC3 mechanism as evidenced by the solvent isotope effect and by the effect of the solvent composition on the rate coefficient. The second step of the reaction is significantly slower than the first one, presumably owing to the retarding inductive effect of the dissociated carboxylate group. The imidazole-catalyzed degradation of 4-NPO proceeds by the successive release of the two 4-nitrophenol groups and includes the formation and decomposition of 1,1'-oxalyldiimidazole. Although the hydrolytic reactivity of 4-NPO and 4-nitrophenyl dichloroacetate are close to each other, the reactivity of imidazole toward 4-NPO is considerably higher than toward 4-nitrophenyl dichloroacetate. The difference in reactivity is possibly due to the neighboring carbonyl group stabilization of the transition state for the partitioning of an addition intermediate in the direction of substituted phenoxide ion expulsion in the reaction of 4-NPO.
 IT 18637-83-7P, 1,1'-Oxalyldiimidazole
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (intermediate in imidazole-catalyzed decomposition of bis(nitrophenyl) oxalate)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



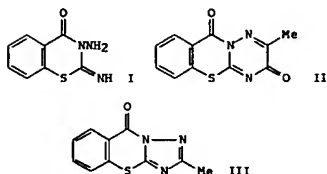
L12 ANSWER 33 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1995:296280 CAPLUS
 DOCUMENT NUMBER: 122:104961
 TITLE: Convenient one-pot method for formylation of amines and alcohols using formic acid and 1,1'-oxalyldiimidazole
 AUTHOR(S): Kitagawa, Tokujiro; Arita, Junko; Nagahata, Atsuko
 CORPORATE SOURCE: Fac. Pharm. Sci., Kobe Gakuin Univ., Kobe, 651-21, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1994), 42(8), 1655-7
 CODEN: CPBTAL; ISSN: 0009-2363
 PUBLISHER: Pharmaceutical Society of Japan
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 122:104961
 AB 1,1'-Oxalyldiimidazole reacts with formic acid in acetonitrile at room temperature to give N-formylimidazole, which promptly undergoes aminolysis and alcoholysis to yield formamides or formates.
 IT 18637-83-7, 1,1'-Oxalyldiimidazole
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (formylation of amines and alcs. using formic acid and oxalyldiimidazole)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



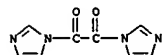
L12 ANSWER 34 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1994:252886 CAPLUS
 DOCUMENT NUMBER: 120:252886
 TITLE: 1,1'-Oxalyldiimidazole as Chemiluminescence Reagent in the Determination of Low Hydrogen Peroxide Concentrations by Flow Injection Analysis
 AUTHOR(S): Stigbrand, Malin; Ponten, Einar; Irgum, Knut
 CORPORATE SOURCE: Department of Analytical Chemistry, University of Umea, Umea, S-901 87, Swed.
 SOURCE: Analytical Chemistry (1994), 66(10), 1766-70
 CODEN: ANCHAM; ISSN: 0003-2700
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The reaction between 1,1'-oxalyldiimidazole (ODI) and hydrogen peroxide was studied. The flow system was simplified by the use of an immobilized fluorophore (3-aminofluoranthene) on an acrylate polymer. The chemiluminescent intensities were compared with those obtained by the reaction between trichlorophenyl oxalate (TCPO) and hydrogen peroxide (catalyzed by imidazole). The results show that ODI is about 10 times more sensitive than TCPO. When these compds. were compared in a static system, their different kinetics were quite obvious. The total amount of light produced is equal, but the ODI reaction is faster compared to the TCPO reaction. The estimated detection limit for H2O2 in water was 1 + 10-8M (0.5 pg injected).
 IT 18637-83-7, 1,1'-Oxalyldiimidazole
 RL: ANST (Analytical study)
 (chemiluminescence reagent, for flow injection anal. of hydrogen peroxide in water)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



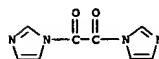
L12 ANSWER 35 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1993:603378 CAPLUS
 DOCUMENT NUMBER: 119:203378
 TITLE: Condensed 1,3-benzothiazinones 5. Synthesis of 2-substituted 3H,10H-[1,2,4]triazino[6,1-b]-(1,3)benzothiazine-3,10-diones
 AUTHOR(S): Liu, Kang Chien; Shih, Bi Jane; Tao, Tung Mei
 CORPORATE SOURCE: Inst. Pharm., Natl. Def. Med. Cent., Taipei, Taiwan
 SOURCE: Zhonghua Yaoxue Zazhi (1993), 45(2), 89-94
 CODEN: CYHCEX; ISSN: 1016-1015
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



AB The title compds. were prepared by reaction of aminoiminodihydrobenzothiazine one I with α -oxo carboxylic esters or 1,2-dielectrophiles. Thus, I and Me pyruvate were refluxed for 8 h in AcOH to give 27% methyltriazinobenzothiazinedione II and 18% the methyltriazinobenzothiazinone III.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (acylation by, of aminoiminodihydrobenzothiazine)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



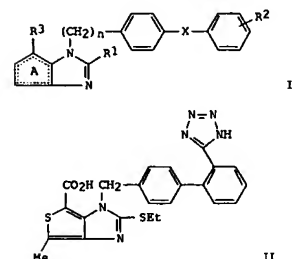
L12 ANSWER 36 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1993:603082 CAPLUS
 DOCUMENT NUMBER: 119:203082
 TITLE: Synthesis of symmetrical diaryl 1,2-diketones from Grignard reagents and 1,1'-oxalylimidazole
 AUTHOR(S): Mitchell, Reginald H.; Iyer, Vivekanandan S.
 CORPORATE SOURCE: Dep. Chem., Univ. Victoria, Victoria, BC, V8W 3P6, Can.
 SOURCE: Tetrahedron Letters (1993), 34(23), 3683-6
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 119:203082
 AB Sym. diaryl 1,2-diketones (α -diketones) are obtained in reasonably good yields when readily accessible 1,1'-oxalylimidazole (I) is treated with two equivalent of an aryl Grignard reagent. Thus, reaction of I (prepared in situ by reaction of imidazole with ClCOCOC1) with PhMgBr in THF gave 60% PhCOCOPh.
 IT 18637-83-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reaction of, with Grignard reagents, diaryl diketones by)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 37 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1992:531198 CAPLUS
 DOCUMENT NUMBER: 117:131198
 TITLE: Preparation of thienimidazoles as angiotensin II antagonists.
 INVENTOR(S): Naka, Takehiko; Inada, Yoshiyuki
 PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
 SOURCE: Eur. Pat. Appl., 67 pp.
 CODEN: EPXOXW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

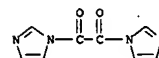
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 483683	A2	19920506	EP 1991-118234	19911025
EP 483683	A3	19920603		
EP 483683	B1	19960228		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AU 9186707	A1	19920507	AU 1991-86707	19911022
AU 636066	B2	19930408		
AT 134633	E	19960315	AT 1991-118234	19911025
CA 2054465	AA	19920501	CA 1991-2054465	19911029
FI 9105099	A	19920501	FI 1991-5099	19911029
NO 9104236	A	19920504	NO 1991-4236	19911029
JP 05059062	A2	19930309	JP 1991-281821	19911029
JP 3099096	B2	20001016		
CN 1061973	A	19920617	CN 1991-108382	19911030
HU 62005	A2	19930329	HU 1991-3417	19911030
NO 9200009	A	19921026	NO 1992-9	19920102
US 5463073	A	19951031	US 1993-112793	19930827
			JP 1990-294655	A 19901030
			JP 1991-92081	A 19910423
			JP 1991-150643	A 19910621
			US 1991-782549	B1 19911025

PRIORITY APPLN. INFO.:
 OTHER SOURCE(S): MARPAT 117:131198
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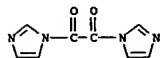


L12 ANSWER 37 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

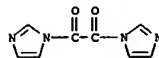
AB Title compds. [I; A = (substituted) thiophene ring; R1 = H, (substituted) hydrocarbyl which may be bonded through a heteroatom; R2, R3 = groups capable of forming anions; X = bond, spacer; n = 1,2], were prepared. Thus, Me 2-ethylthio-4-methylthieno[3,4-d]imidazole-6-carboxylate (preparation given) and 4-[2'-(N-trityltetrazol-5-yl)phenyl]benzyl bromide were stirred with NaH in THF at room temp for 2 h to give a separable mixture of 1- and 3-substituted products; the former was detritylated with 1 N HCl followed by saponification with 1 N NaOH to give title compound II. II at 1 mg/kg orally showed $\geq 70\%$ inhibition of angiotensin II-induced pressor response in rats. Dosage formulations were prepared containing II and other specific I.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in preparation of thienimidazole angiotensin II antagonist)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 38 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1991:206703 CAPLUS
 DOCUMENT NUMBER: 114:206703
 TITLE: An improved method for the synthesis of arylacetoneitriles from 3-aryl-2-hydroxyiminopropionic acids using 1,1'-oxalyldiimidazole
 AUTHOR(S): Kitagawa, Tokujiro; Kawaguchi, Megumi; Ikiuchi, Misuzu
 CORPORATE SOURCE: Fac. Pharm. Sci., Kobe Gakuin Univ., Kobe, 673, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1991), 39(1), 187-9
 CODEN: CPBTAL; ISSN: 0009-2363
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 114:206703
 AB 1,1'-Oxalyldiimidazole is a useful reagent for the degradation of 3-aryl-2-hydroxyiminopropionic acids RCH2C(=NOH)CO2H (R = Ph, substituted Ph 1-naphthyl, 2-furyl, 2-thienyl, 3-indolyl) to the corresponding arylacetoneitriles RCH2CN under essentially neutral conditions.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent) (agent, for conversion of aryl (hydroxyimino)propionic acid to aryl acetoneitriles)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

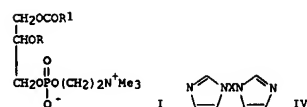


L12 ANSWER 39 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1991:42334 CAPLUS
 DOCUMENT NUMBER: 114:42334
 TITLE: Pigments of fungi. XV. An efficient, unambiguous route to unsymmetrically substituted dibenzyl acylolins and their use in the synthesis of fungus pigments of the pulvinone and grevilline types
 AUTHOR(S): Gill, Melvyn; Kiefel, Milton J.; Lally, Deborah A.; Ten, Abilio
 CORPORATE SOURCE: Dep. Org. Chem., Univ. Melbourne, Parkville, 3052, Australia
 SOURCE: Australian Journal of Chemistry (1990), 43(9), 1497-518
 CODEN: AJCHAS; ISSN: 0004-9425
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 114:42334
 AB RCH2CH(OH)COCH2R1 [I, R, R1 = Ph, 4-MeOC6H4, 3,4-(MeO)2C6H3] including those bearing unsym. disposed aryl residues are assembled in high yield by reaction between RCH2CH(CN)OSiMe3 and benzyl Grignard reagents. I are deprotonated with LiN(CMe2)2 to afford alcoholate enolate dianions which can be made to react with carbonyldiimidazole and with oxalyldiimidazole, resp., to ultimately afford fungus pigments of the pulvinone and grevilline types.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent) (cyclization of, with hydroxydiarylbutanones)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

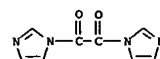


L12 ANSWER 40 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1989:95709 CAPLUS
 DOCUMENT NUMBER: 110:95709
 TITLE: Manufacture of pharmacologically active phospholipid derivatives
 INVENTOR(S): Saigo, Takuya; Nakayama, Masaharu
 PATENT ASSIGNEE(S): Nippon Oils & Fats Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63215685	A2	19880908	JP 1987-45264	19870302
PRIORITY APPLN. INFO.: MARPAT 110:95709				
OTHER SOURCE(S):				
GI				



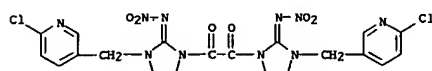
AB Pharmacol. active (no data) title derivs. I [R = CO(CH2)nCO2H; R1 = C3-21 alkyl; n = 2-20] (III) are prepared by treating I (R = H) (III) with HO2C(CH2)nCO2H in the presence of diimidazoles IV (X = CO, COCO). A suspension of III (R1 = Cl5H31) in DMSO was treated with azelaic acid in THF in the presence of IV (X = CO) (V) at room temperature for 4 h to give
 21.11 II (R1 = Cl5H31, n = 7). Without V, the product was not obtained.
 IT 18637-83-7, 1,1'-Oxalyldiimidazole
 RL: CAT (Catalyst use); USES (Uses) (catalyst, for acylation of lysophosphatidylcholines with dicarboxylic acids)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



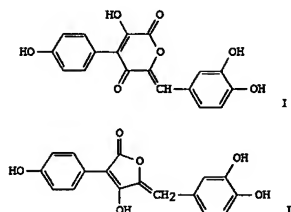
L12 ANSWER 41 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1989:8210 CAPLUS
 DOCUMENT NUMBER: 110:8210
 TITLE: Preparation of insecticidal 2-(nitroimino or cyanamino)imidazolidine and -hexahydroimidine derivatives, process for their preparation, and their intermediates
 INVENTOR(S): Shiokawa, Kozi; Tsuboi, Shinichi; Morie, Koichi; Shibuya, Katsuhiko
 PATENT ASSIGNEE(S): Nihon Tokushu Noyaku Seizo K. K., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 49 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63156786	A2	19880629	JP 1986-301333	19861219
JP 07084461	B4	19950913		
EP 277317	A1	19880810	EP 1987-118054	19871207
EP 277317	B1	19910403		
R: BE, CH, DE, FR, GB, IT, LI, NL				
US 4880933	A	19891114	US 1987-130376	19871208
IL 84843	A1	19920621	IL 1987-84843	19871216
CA 1320202	A1	19930713	CA 1987-554583	19871217
BR 8706927	A	19880726	BR 1987-6927	19871218
HU 47085	A2	19890130	HU 1987-5872	19871218
HU 200753	B	19900828		
JP 07278140	A2	19951024	JP 1994-291932	19941102
JP 3209649	B2	20010917		
PRIORITY APPLN. INFO.: IL 1986-77750 A 19860131				
JP 1986-301333 A 19861219				
OTHER SOURCE(S): CASREACT 110:8210; MARPAT 110:8210				
GI For diagram(s), see printed CA issue.				
AB The title compds. [I: R = H, alkyl; V = 5- or 6-membered heterocyclyl containing at least 1 N, O, S; Y = O2N, cyano; A = (un)substituted (CH2)2-3; Z = (un)substituted alkyl, alkenyl, alkynyl, aryl, alkoxy, alkylthio, arylthio, or cycloalkyl, cyano, CHO, aryloxy, alkenyloxy, (un)substituted heterocyclyl containing N, O, or S, (un)substituted (thio)carbamoyl, CO2R1, etc.; R1 = Q, (un)substituted heterocyclyl containing N, O, or S; T = S, S2, (CO)2, C(S), S(O)2], useful as insecticides, were prepared 60N NaH (0.4 g) was added at room temperature to a solution of 3.2 g 1-(2-(3,5-dichloropyrid-2-yl)oxy)ethyl-2-nitroiminoimidazolidine in DMF and the mixture was stirred until evolution of H ceased. Then, 1.7 g 2-chloro-5-(chloromethyl)thiazole was added at room temperature and the mixture was stirred at room temperature for 1 h and at 40° for 30 min to give 2.7 g an imidazolidine derivative II. I at 5200 ppm exhibited excellent insecticidal activity against Nephrotettix cincticeps and Sogatella furcifera.				
IT 117906-10-2P RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as insecticide) RN 117906-10-2 CAPLUS CN 2-imidazolidinimine, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis[3-(6-chloro-3-				

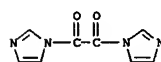
L12 ANSWER 41 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
pyridinyl)methyl]-N-nitro- (9CI) (CA INDEX NAME)



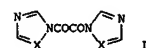
L12 ANSWER 42 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:530792 CAPLUS
DOCUMENT NUMBER: 109:130792
TITLE: Pigments of fungi. Part 9. Synthesis of fungus pigments of the grevillin and pulvinone types from benzylacetoins
AUTHOR(S): Gill, Melvyn; Kiefel, Milton J.
CORPORATE SOURCE: Dep. Org. Chem., Univ. Melbourne, Parkville, 3052, Australia
SOURCE: Tetrahedron Letters (1988), 29(17), 2085-8
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:130792
GI



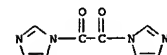
AB Grevillin-B (I) and 3',4,4'-trihydroxypulvinone (II): principal coloring materials of the mycorrhizal toadstool Suillus grevillei were synthesized in good yield starting from 3,4-(MeO)2C6H3CH2CH(OH)COCH2C6H4OMe-4 and 1,1'-oxalyl- or 1,1'-carbonylbisimidazole, resp.
IT 18637-83-7, 1,1'-Oxalylbisimidazole
RL: RCT (Reactant); RACT (Reactant or reagent) (cyclocondensation of, with benzylacetoins)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



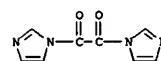
L12 ANSWER 43 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:185845 CAPLUS
DOCUMENT NUMBER: 108:185845
TITLE: Facile conversions of carboxylic acids into amides, esters, and thio esters using 1,1'-oxalylbisimidazole and 1,1'-oxalyl-1,2,4-triazole
AUTHOR(S): Kitagawa, Tokujiro; Kuroda, Hiroko; Sasaki, Hideaki; Kawasaki, Koichi
CORPORATE SOURCE: Fac. Pharm. Sci., Kobe Gakuin Univ., Kobe, 673, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1987), 35(10), 4294-301
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 108:185845
GI



AB Aliphatic, aromatic, and heteroarom. carboxylic acids react with 1,1'-oxalylbisimidazole (I; X = CH) or with I (X = N) in MeCN for 40 min at 40° to give the corresponding 1-acylazole intermediates, which then undergo aminolysis and alcoholysis to form amides (including dipeptides), esters, and thio esters. Thus, 4-O2NC6H4CO2H (II) was treated with I (X = CH) in MeCN and then with PhNH2 to give 96% 4-O2NC6H4CONHPh. Similarly, treatment of II with I (X = N) and then MeOH or PhSH gave 76% 4-O2NC6H4CO2Me and 66% 4-O2NC6H4COSPh, resp.
IT 18637-83-7
RL: RCT (Reactant); RACT (Reactant or reagent) (promoter, for esterification and amidation of carboxylic acids)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 44 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:597111 CAPLUS
DOCUMENT NUMBER: 107:197111
TITLE: A convenient one-stage synthesis of carboxylic acid anhydrides using 1,1'-oxalylbisimidazole
AUTHOR(S): Kitagawa, Tokujiro; Kuroda, Hiroko; Sasaki, Hideaki
CORPORATE SOURCE: Fac. Pharm. Sci., Kobe Gakuin Univ., Kobe, 673, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1987), 35(3), 1262-5
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 107:197111
AB Aliphatic, aromatic, and heteroarom. carboxylic acids react with 1,1'-oxalylbisimidazole in acetonitrile under reflux in the presence of methanesulfonic acid to give the corresponding carboxylic acid anhydrides in 30-98% yields.
IT 18637-83-7, 1,1'-Oxalylbisimidazole
RL: RCT (Reactant); RACT (Reactant or reagent) (dehydration by, of acids)
RN 18637-83-7 CAPLUS
CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1987:460740 CAPLUS

DOCUMENT NUMBER: 107:60740

TITLE: Photolyzable sterically-hindered amides as light

stabilizers

INVENTOR(S): Berner, Godwin; Slongo, Mario

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Ger. Offen., 16 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

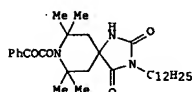
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3628845	A1	19870312	DE 1986-3628845	19860825
US 4785102	A	19881115	US 1986-899133	19860821
GB 2180235	A1	19870325	GB 1986-20533	19860822
GB 2180235	B2	19890809		
FR 2586678	A1	19870306	FR 1986-12122	19860827
FR 2586678	B1	19900302		
JP 62051668	A2	19870306	JP 1986-201222	19860827
US 4952620	A	19900828	US 1988-231315	19880812
US 33489	E	19901211	US 1989-411962	19890925
PRIORITY APPLN. INFO.:			CH 1985-3668	A 19850827
			US 1986-899133	A3 19860821

GI



AB The title amides are photolyzed in situ to hindered amine stabilizers, and are therefore inert to acid catalysts for curing of resins. The amide I was prepared from PhCOON and the corresponding amine in CH₂Cl₂ containing

Et₃N

at -10 to 0°. A primer of polyester-cellulose ester-melamine resin topcoated with an acrylic resin-polyisocyanate composition containing 18 I, cured

45 min at 80° and exposed to Florida sunshine for 0, 6, 12, 18, and 24 mo, had 20° gloss 96, 87, 84, 78, and 73, resp.; vs. 96, 84, 81, 59, and 43, resp., without I.

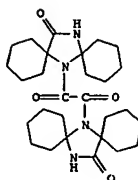
IT 109422-98-2

RL: USES (Uses)

(light stabilizers, photolyzable, for acid-curable resins)

RN 109422-98-2 CAPLUS

CN 7,14-Diazadipiro[5.1.5.2]pentadecan-15-one, 7,7'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1987:213789 CAPLUS

DOCUMENT NUMBER: 106:213789

TITLE: Strain-barrier stabilized products from the Fischer indole synthesis. Compounds containing the 4H-imidazo[1,2-a]pyrrolo[3,4-b]indole and dipyrrolo[3,4-b:3',4'-b'] [1,3]diazeto[1,2-a:3,4-a']diindole ring systems

AUTHOR(S): Southwick, Philip L.; Sullivan, Daniel S., III
CORPORATE SOURCE: Dep. Chem., Carnegie-Mellon Univ., Pittsburgh, PA, 15213, USA

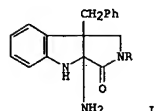
SOURCE: Synthesis (1986), (9), 731-5
CODEN: SYNTEB; ISSN: 0039-7881

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 106:213789

GI



AB The angular 3a-amino groups of 3a-amino-1,3a,4,8b-tetrahydropyrrolo[3,4-b]indol-3(2H)-ones (I, R = cyclohexyl, Me) fail to undergo the expected spontaneous elimination (as ammonia) which would introduce a 3a-4 double bond. The resistance of the amino group to elimination is such that reaction with oxalyl chloride bridges that group to the 4-nitrogen to create a stable dioximidazole ring. Replacement of the amino group by methoxy takes place in methanolic sulfuric acid. 3A-amino-1,2,3,3a,4,8b-hexahydropyrrolo[3,4-b]indoles undergo ammonia elimination in acid solution, but yield expected 1,2,3,8b-tetrahydropyrrolo[3,4-b]indoles only as transient precursors of stable products, apparently their sym. dimers (dipyrrolo[3,4-b:3',4'-b'] [1,3]diazeto[1,2-a:3,4-a']diindoles).

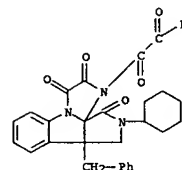
IT 108444-10-6P

RL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and spectra of)

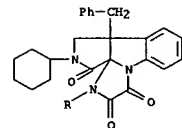
RN 108444-10-6 CAPLUS

CN 4H-imidazo[1,2-a]pyrrolo[3,4-b]indole-3,5,6(2H)-trione, 4,4'-(1,2-dioxo-1,2-ethanediyl)bis[2-cyclohexyl-1,11b-dihydro-11b-(phenylmethyl)- (9CI) (CA INDEX NAME)

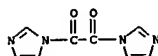
PAGE 1-A



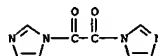
PAGE 2-A



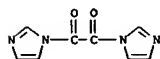
L12 ANSWER 47 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1986:533001 CAPLUS
 DOCUMENT NUMBER: 105:133001
 TITLE: A useful method for the conversion of aldehyde oximes into nitriles using 1,1'-oxalyldiimidazole
 AUTHOR(S): Kitagawa, Tokujiro; Sasaki, Hideaki; Ono, Noriyuki
 CORPORATE SOURCE: Fac. Pharm. Sci., Kobe Gakuin Univ., Kobe, 673, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1985), 33(9), 4014-14
 CODEN: CPBTAL; ISSN: 0009-2363
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 105:133001
 AB Under neutral conditions, aliphatic, alicyclic, aromatic, and heteroarom. aldehyde oximes RCH=NOH react with 1,1'-oxalyldiimidazole in benzene, acetonitrile, chloroform, or THF at 65-70° within 1 h to give the corresponding nitriles (RCN) in good yield.
 IT 18637-83-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (dehydration by, of aldehyde oximes to nitriles)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 48 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1985:166667 CAPLUS
 DOCUMENT NUMBER: 102:166667
 TITLE: A facile method for activation of carboxylic acids
 AUTHOR(S): Murata, Shizuaki
 CORPORATE SOURCE: Coll. Gen. Educ., Nagoya Univ., Nagoya, 464, Japan
 SOURCE: Bulletin of the Chemical Society of Japan (1984), 57(12), 3597-8
 CODEN: BCSJAB; ISSN: 0009-2673
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 102:166667
 AB 1,1'-Oxalyldi-1,2,4-triazole, -imidazole, and -1,2,3,4-tetrazole were prepared in situ from oxalyl dichloride and corresponding 1H-azoles. The 1,1'-oxalyldi-azoles converted carboxylic acids and their salts into 1-acylazoles.
 IT 18637-83-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reaction of, with carboxylic acids)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



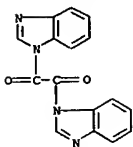
L12 ANSWER 49 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1984:138561 CAPLUS
 DOCUMENT NUMBER: 100:138561
 TITLE: 1,1'-Oxalyldiimidazole, a new reagent for activation of carboxylic acid
 AUTHOR(S): Murata, Shizuaki
 CORPORATE SOURCE: Coll. Gen. Educ., Nagoya Univ., Furo, 464, Japan
 SOURCE: Chemistry Letters (1983), (12), 1819-20
 CODEN: CHMTAG; ISSN: 0366-7022
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 100:138561
 AB Carboxylic acids and their salts are converted into 1-acylimidazoles by the title reagent. Treatment of the 1-acylimidazoles with alcs. gave the carboxylic esters. This reaction is applied to the esterification of fatty acids.
 IT 18637-83-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, and activation of carboxylic acids by)
 RN 18637-83-7 CAPLUS
 CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 50 OF 55 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1981:1788 CAPLUS
 DOCUMENT NUMBER: 94:1788
 TITLE: Reagents and specific binding study methods for detecting ligands in a liquid medium
 INVENTOR(S): Boguslaski, Robert Charles; Carrico, Robert Joseph
 PATENT ASSIGNEE(S): Miles Laboratories, Inc., USA
 SOURCE: Ger. Offen., 43 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2952498	A1	19800724	DE 1979-2952498	19791227
DE 2952498	C2	19831110		
US 4238195	A	19801209	US 1979-4580	19790118
CA 1133392	A1	19821012	CA 1979-341540	19791210
GB 2044449	A	19801015	GB 1980-86	19800102
GB 2044449	B2	19830420		
JP 55096458	A2	19800722	JP 1980-3148	19800117
JP 02010382	B4	19900307		

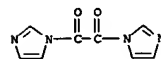
PRIORITY APPLN. INFO.: US 1979-4580 A 19790118
 AB A competitive binding assay is described in which a conjugate of a fluorescent label with the ligand to be determined is used and in which the light emitted by the fluorescent label is measured after it is excited chemically by a high-energy intermediate obtained by the reaction of H2O2 with oxalyl chloride, an oxamide, or a bis(oxalate). The assay may be used for the determination of antigens, haptens, antibodies, hormones, vitamins, drugs, receptors, etc. Thus, for the determination of sisomicin (I), lissamine rhodamine B was purified chromatog. and coupled to I. The resulting conjugate was purified by column chromatog. and paper electrophoresis. Antibodies to I, the I-lissamine rhodamine B conjugate, and I then were incubated for 20 min at room temperature Carbowax 6000-PEG was added, and the precipitate was removed by centrifugation. H2O2 and bis(2,4-dinitrophenyl) oxalate were added to an aliquot of the supernate, and the light produced was measured photometrically at 579 nm. This technique can be used for homogeneous or heterogeneous binding assays.
 IT 14805-57-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in competitive-binding assays, with chemical excited fluorescent labels)
 RN 14805-57-3 CAPLUS
 CN 1H-Benzimidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1980:163905 CAPLUS
DOCUMENT NUMBER: 92:163905
TITLE: Reactions of azoles with inorganic acid chlorides
AUTHOR(S): Walter, Wolfgang; Radke, Matthias
CORPORATE SOURCE: Inst. Org. Chem. Biochem., Univ. Hamburg, Hamburg, D-2000/13, Fed. Rep. Ger.
SOURCE: Liebigs Annalen der Chemie (1979), (11), 1756-67
CODEN: LACHDL; ISSN: 0170-2041
DOCUMENT TYPE: Journal
LANGUAGE: German
GI



AB Diimidazoles I (Z = CO, CS, S, S₂, SO, SO₂) were prepared either by reaction of imidazole or 1-(trimethylsilyl)imidazole with ZCl₂. COCl₂ reacted with I (Z = CO) to give imidazole-1-carbonyl chloride. Treating N-(trimethylsilyl)azoles with ClCOCl gave RC(O)SR (R = imidazol-1-yl, benzimidazol-1-yl, benzotriazol-1-yl), R1COR1 (R1 = imidazol-1-yl, 1,2,4-triazol-1-yl), or mixts. RCOSR and R1COR1 (R, R1 = benzotriazol-1-yl), depending on the azolyl group or reaction conditions. RC(O)SR (R's as above) eliminated S to give R1COR1 (R1 = R).
IT 18637-83-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
RN 18637-83-7 CAPLUS
CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

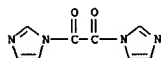


ACCESSION NUMBER: 1978:50175 CAPLUS
DOCUMENT NUMBER: 88:50175
TITLE: Chemiluminescent mixtures
PATENT ASSIGNEE(S): American Cyanamid Co., USA
SOURCE: Neth. Appl., 22 pp. Division of Neth. 66 12,653.
CODEN: NAXXAN
DOCUMENT TYPE: Patent
LANGUAGE: Dutch
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

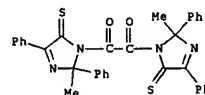
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 167462	B	19810716	NL 1976-14490	19761228
NL 7614490	A	19770429		
NL 167462	C	19811216		
US 3399137	A	19680827	US 1965-485920	19650908
US 3470103	A	19690930	US 1965-489748	19650923
US 3400080	A	19680903	US 1966-520044	19660112
US 3442815	A	19690506	US 1966-520052	19660112
NL 6612653	A	19670309	NL 1966-12653	19660908
US 3804891	A	19740416	US 1971-145569	19710520
			US 1965-485920	A 19650908
			US 1965-489748	A 19650923
			US 1965-491896	A 19650930
			US 1966-547782	19660505
			NL 1966-12653	19660908
			US 1966-547761	19660505
			US 1966-520052	19660112
			US 1966-520044	19660112
			US 1965-425599	A2 19651113
			US 1968-737307	A3 19680617

AB The reaction of oxamides RCOCOR (R = 2,4-(O₂N)2C₆H₃NH, PhSO₂NPh, 4-nitrophthalimido, 1-imidazolyl, 2-oxo-1,2-dihydro-1-pyridyl) and the esters R1O₂CCO₂R1 [R1 = 2,4-(O₂N)2C₆H₃, 6,2,4-Me(O₂N)2C₆H₂, 3-F3CC₆H₄, C₆H₅] with H₂O₂ gave much longer-lasting chemiluminescence than the reaction of ClCOCOC1 with H₂O₂. Thus a mixture of 3-5 mg PhSO₂NPhCOCONPhSO₂Ph in 5 mL MeCH₂CH₂OMe with 1 mg fluorescein, 0.2 mL 50% H₂O₂, and 0.2 mL 10% aqueous KOH gave medium intensity chemiluminescence for 95 min, followed by weak chemiluminescence for 5.5 h. The intensity of the chemiluminescence was compared with that obtained with ClCOCOC1-H₂O₂.

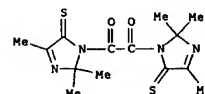
IT 18637-83-7
RL: PRP (Properties)
(chemiluminescence from reaction of hydrogen peroxide with)
RN 18637-83-7 CAPLUS
CN 1H-imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



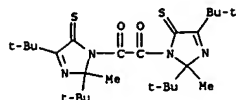
ACCESSION NUMBER: 1976:74181 CAPLUS
DOCUMENT NUMBER: 84:74181
TITLE: Joint action of elemental sulfur and gaseous ammonia upon ketones. 88. Substitution products of 2H-imidazole-4(3H)-thiones and 2H-imidazol-4(3H)-ones
AUTHOR(S): Asinger, Friedrich; Saus, Alfons; Fichtner, E.; Graeber, H. J.; Leuchtenberger, W.
CORPORATE SOURCE: Inst. Tech. Chem. Petrolechem., Rheinisch-Westfael. Tech. Hochsch., Aachen, Fed. Rep. Ger.
SOURCE: Monatshefte fuer Chemie (1975), 106(6), 1449-60
CODEN: MOCHB7; ISSN: 0026-9247
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 84:74181
GI For diagram(s), see printed CA Issue.
AB Na salts of 2H-imidazole-4(3H)-thiones [I; R, R1, R2 = Ph, Me, CH₃, or R1R2 = (CH₂)₅, R3 = H] reacted with alkyl and aryl carboxylic acid chlorides to give the corresponding 3-acyl-2H-imidazole-4(3H)-thiones (I, R3 = Et, Ac, COEt, CO₂Pr, cyclopropylcarbonyl, etc.), with dicarboxylic acid dichlorides the N,N'-diacylbis-3-imidazoline-5-thiones II [X = (CH₂)₄, (CH₂)₈, etc.] were obtained, whereas with carbamic acid chlorides and chloroformic acid esters the corresponding ureas (I, R3 = CONMe₂, COMe₂, etc.) and urethane derivs. [I, R3 = CO₂Bu, CO₂(CH₂)₄CHMeEt] were formed. Analogously 2H-imidazol-4(3H)-ones reacted with acid chlorides to the corresponding 3-acyl-2-imidazol-4(3H)-ones.
IT 58488-90-7P 58488-94-1P 58488-95-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 58488-90-7 CAPLUS
CN 4H-imidazole-4-thione, 3,3'-(1,2-dioxo-1,2-ethanediyl)bis[2,3-dihydro-2-methyl-2,5-diphenyl- (9CI) (CA INDEX NAME)]



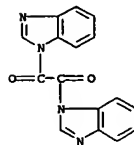
RN 58488-94-1 CAPLUS
CN 4H-imidazole-4-thione, 3,3'-(1,2-dioxo-1,2-ethanediyl)bis[2,3-dihydro-2,2,5-trimethyl- (9CI) (CA INDEX NAME)]



RN 58488-95-2 CAPLUS
CN 4H-imidazole-4-thione, 3,3'-(1,2-dioxo-1,2-ethanediyl)bis[2,5-bis(1,1-dimethylethyl)-2,3-dihydro-2-methyl- (9CI) (CA INDEX NAME)]



ACCESSION NUMBER: 1968:38860 CAPLUS
 DOCUMENT NUMBER: 68:38860
 TITLE: Chemiluminescence from reactions of electrophilic oxamides with hydrogen peroxide and fluorescent compounds
 AUTHOR(S): Maulding, Donald R.; Clarke, Rose Ann; Roberts, Bernard George; Rauhut, Michael M.
 CORPORATE SOURCE: American Cyanamid Co., Stamford, CT, USA
 SOURCE: Journal of Organic Chemistry (1968), 33(1), 250-4
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Chemiluminescence was observed from the reactions of electrophilic oxamides with H₂O₂ in the presence of fluorescent. A general relationship was found between the efficiency of the light emission and the reactivity of the oxamide toward H₂O₂. The intensity of chemiluminescence varied substantially with the solvent, catalyst, fluorescer, and peroxide. The emitting species in the chemiluminescent reactions was the first excited singlet state of the fluorescer. 18 references.
 IT 14805-57-3
 RL: PRP (Properties)
 (chemiluminescence of)
 RN 14805-57-3 CAPLUS
 CN 1H-Benzimidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1968:21847 CAPLUS
 DOCUMENT NUMBER: 68:21847
 TITLE: Preparation of chemiluminescent compounds
 PATENT ASSIGNEE(S): American Cyanamid Co.
 SOURCE: Neth. Appl., 49 pp.
 CODEN: NAXKAN
 DOCUMENT TYPE: Patent
 LANGUAGE: Dutch
 FAMILY ACC. NUM. COUNT: 8
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6612653	A	19670309	NL 1966-12653	19660908
US 3399137	A	19680827	US 1965-485920	19650908
US 3470103	A	19690930	US 1965-489748	19650923
US 3400080	A	19680903	US 1966-520044	19660112
US 3442815	A	19690506	US 1966-520052	19660112
SE 304974	B	19681014	SE 1966-12094	19660908
DE 1792774	A1	19750619	DE 1967-1792774	19660908
DE 1792774	B2	19810611		
DE 1792774	C3	19820513		
DE 1795795	A1	19750619	DE 1967-1795795	19660908
DE 1592824	B2	19810625	DE 1966-A53455	19660908
DE 1592824	C3	19820408		
US 3804891	A	19740416	US 1971-145569	19710520
NL 167462	B	19810716	NL 1976-14490	19761228
NL 7614490	A	19770429		
NL 167462	C	19811216		

PRIORITY APPLN. INFO.:

US 1965-485920	A	19650908
US 1965-489748	A	19650923
US 1965-491896	A	19650930
US 1966-520044	A	19660112
US 1966-520052	A	19660112
US 1966-547761	A	19660505
US 1966-547782	A	19660505
US 1965-425599	A2	19651113
NL 1966-12653		19660908
US 1968-737307	A3	19680617

GI For diagram(s), see printed CA Issue.

AB Chemiluminescent comps. are prepared Ph₃CCO₂C(O)(O)O₂CCPh₃ (3 mg.) was added to 1 mg. 9,10-diphenylanthracene, 0.25 ml. H₂O, and 0.5 ml. 90% aqueous

H₂O₂ in 5 ml. 1,2-dimethoxyethane at 25°. A strong blue light was emitted during 15-20 min. Addition of KOH diminishes the chemiluminescence. Similar mixts. were prepared with diacetic oxalic anhydride; dilauric oxalic anhydride; bis(4-methoxybenzoic oxalic anhydride); 2,2',4,4'-tetranitrooxanilide; N,N'-bis(phenylsulfonyl) oxanilide; bis(4-nitrophthalyl) oxamide; bis-1-imidazolylglyoxal; 2,4-dinitrophenyl oxalate; bis(1,2-dihydro-2-oxo-1-pyridyl)glyoxal; bis(5-oxo-1,5-dihydro-1-quinolyl)glyoxal diphthalimido oxalate dimaleimido oxalate and dipiperidyl oxalate I is prepared by adding 2.2 ml. oxalyl chloride and 5.05 g. triethylamine to a stirred solution of 4.76 g. 2-hydroxypyridine in 150 ml. 1,2-dimethoxyethane. After 1 hr., the solvent is distilled off, 25 ml. CHCl₃ added and distilled off, and the residue recrystd. from benzene, yielding 2.76 g. i. m. 164-74°. Also, 10 ml. 1M aqueous Na₂O₂ was added to 0.2 g. 9,10-diphenyl-9,10-dihydroanthracene-9,10-dicarboxylic anhydride in 10 ml. tetrahydrofuran. Blue light was emitted. Similarly, chemiluminescent mixts. were prepared with 9,10-dichlorocarbonyl-9,10-diphenyl-9,10-dihydroanthracene and 9,10-bis(4-nitrophenyloxycarbonyl)-

9,10-diphenyl-9,10-dihydroanthracene.
 IT 18637-83-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 18637-83-7 CAPLUS
 CN 1H-Imidazole, 1,1'-(1,2-dioxo-1,2-ethanediyl)bis- (9CI) (CA INDEX NAME)

